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Editorial.

DEFENCE AGAINST INVASION.

IT is a sound maxim, both in military and in medical matters, that a well-organised scheme of defence is at once a more rational and more efficient protection against the horrors and the waste of war and of disease than any sublime confidence in human nature on the one hand, or trust that danger will automatically create and call forth its antidote on the other. One may have the profoundest admiration and respect for the amiable monarch who proposed the Peace Conference, and yet entertain the conviction that his scheme was foredoomed to failure. We have only to remember that the first great International Exhibition in 1851, which was confidently expected to herald a long period of peace and harmony amongst the nations, was speedily followed by the disastrous Crimean War, by the Indian Mutiny, by the Chinese War, and a score of similar horrors, in order to realise the truth that there is no such thing as a continuance of passive enjoyment. To many people the huge military armaments of Europe seem a useless burden laid upon the inhabitants of the countries which have to maintain them, and perhaps, regarded from the purely philosophical point of view, these armaments are a discredit to humanity, but until poor humanity becomes imbued with philosophical ideas, we fear that armies and navies will be indispensable equipments. To other people the elaborate precautions taken against the invasions of disease seem irksome and even absurd—appearing to argue timidity and clumsy ignorance. The dislike of medical restraints is not confined to the poorer classes, who are thereby disturbed in their dirty contentment, but permeates the higher and richer classes, or such of them as find their schemes impeded or their avarice curbed by apparently vexatious interference on the part of professional men. Yet all wise men are convinced of the growing importance of preventive measures—of all that is meant by the word prophylaxy—although they may not be agreed as to the precise form which these measures ought to take or the limit to which they ought to be carried. I submit the following considerations for the approval of my professional brethren and of the nation at large.

The whole of Great Britain has been stirred to its inmost depths by the campaign just brought to a successful conclusion in South Africa. And not only Great Britain, but all Europe has been compelled to face great problems of attack and defence, and we English people, so secure in our sea-girt island, have had forced upon us the possibility—the bare possibility, it is true—of invasion by foreign armies. It is not my province to discuss military matters—these may safely be left to our War Office—but it is my province, and indeed my bounden duty, to warn my countrymen that there are other enemies to be guarded against besides European armies and navies, enemies that are all the more subtle because they are invisible and infinitely minute. Against soldiers and sailors and war vessels we can take valid precautions, and we do take them; are we equally prepared against the microbe? Are we prepared for, say, a great outbreak of foot-and-mouth disease next spring? And if we are not, why is this so? It is not sufficient to answer that there has been no serious outbreak of this disease since 1881. No foreign army has landed on our shores for over two hundred years, yet talk of the possibility of invasion has been rife within the last twelve months. Who can tell that the pestilence that walketh in darkness will not reappear within the *next few months?* Nor is it sufficient to say that we have the Contagious Diseases (Animals) Act, and that all we have to do is to set it in force in order to get rid of imported disease. Railway companies in like manner have the block system of signalling, which is theoretically perfect, and works well if you have skilled workmen who conscientiously perform their duty. But railway companies have to train their servants and accustom them to all kinds of complications caused by special trains and duplicate trains and irregularities of all sorts. How have our signalmen been trained? They are all good honest men, with a general knowledge of pathological conditions, and more or less extensive clinical experience, and they are all, above and beyond this, filled with loyalty to their country and their profession, and when the time comes they will behave like heroes and martyrs of science. But zeal is not enough; enthusiasm cannot take the place of experience. I see by the Veterinary Register that out of a total of 3417 members, 1898, or much more than a half, have qualified since 1881, and I have no hesitation in saying that the vast majority of these men have never seen a case of rinderpest, sheep-pox, or of foot-and-mouth disease. Let it be noted also that the men who have qualified since 1881 are the active and energetic part of the profession; the remainder, being older men, may have partially or wholly retired from the more active duties of veterinary surgeons. In any case the majority of our veterinarians are practically unacquainted with the above great pastoral scourges. They have doubtless read about them and heard lectures about them; they may even have seen wax models or actual specimens preserved in college museums, but that

is not sufficient to allow of a rapid and certain diagnosis. Book-learning is an excellent thing; it may be the only learning attainable in a certain branch of science; it may be an excellent preparative for, or a complement of, clinical teaching—it can never take the place of actual experience. It is quite possible to know all about a thing, and yet not know a thing when we see it. A man may be quite able to read a foreign language, and yet may not recognise a single word when it is spoken.

I have stated a very grave case; my readers will ask if I have any remedy to suggest. As matters stand at present, a remedy is very difficult to find. At present, if any outbreak of foot-and-mouth disease takes place,—and this of course is of the rarest possible occurrence—or any outbreak of swine fever, no one except those actually engaged on official duty is allowed admission; a veterinary inspector dare not take his pupil with him; a fellow-surgeon desirous of obtaining knowledge of the disease, unless specially engaged to visit the premises, is debarred from examining the animals. Is this wise or prudent? Does it help or hinder the spread of disease? Surely the answer is easy.

At the Veterinary Congress held in Baden-Baden last year Professor Hess said: "As the principal responsibility falls on the veterinary surgeon, it becomes a necessity for veterinary schools to devote great attention to sanitary police. If this cannot be managed at the clinics, resort must be had to abattoirs or special laboratories of contagious diseases, and frequent visits made to markets and fairs. Many diseases may be mistaken for foot-and-mouth disease, and the differential diagnosis demands a thorough acquaintance with them." I do not see why something of the same kind should not be adopted here, but failing such measures I would propose that Government should select from each Veterinary College annually two or three graduates and send them to one or other of the Continental Colleges where special instruction is given in contagious and infectious diseases. Should this be impracticable, I would suggest that groups of Local Authorities should send at their joint expense one or more of the veterinary surgeons in their districts to visit a French or German College for the purpose of obtaining such knowledge. Ignorance of the foreign language would not be an insuperable difficulty; our learned Continental neighbours could overcome that, and besides, if a stimulus were given to the study of French, German, and Italian by such a scheme, more good would come, and not evil. Science is cosmopolitan and knows no distinction of nationalities, and the sooner we recognise this the better it will be for us.

To go on as we are going at present is to court disaster. It is proverbially futile to lock the door when the steed is stolen. The microbe is a much more deadly enemy than the Boer; he has all the cunning and the "slimness" of the latter, and he is in addition protected by his cloak of invisibility.

THE SHATTERING OF AN IDOL.

THE report of the Council Meeting of the Royal College of Veterinary Surgeons is, we fear, not very edifying reading. Through the hazy obscurity which prevailed only a few gleams of light can be seen. That master of casuistry, Professor M'Fadyean, did a good deal to render the pursuit of truth very difficult. He denied with much indignation a statement made by Mr. Barrett to the effect that he had formerly wished to follow the General Medical Council with regard to the matter of general education, and immediately afterwards admitted that he had desired that the Preliminary Examination of the veterinary student should be precisely on an equality with that to which the medical student was subjected, declaring triumphantly that "that was a different statement." It appears to us a distinction without a difference. Then Mr. Barrett, repeating his statement in a slightly amended form, said—"Professor M'Fadyean has argued over and over again that he would expect the Veterinary Preliminary Examination to equal that of the General Medical Council." To this Professor M'Fadyean gave a denial, and demanded evidence of his ever having made any such statement. What is the difference between "on an equality" and "to equal"? What is the difference between following the General Medical Council on general education and prescribing an identical or even an admittedly equivalent examination? For, be it remarked, the General Medical Council is no more an educational body than the Royal College of Veterinary Surgeons. Both bodies watch attentively the trend of education and public opinion, and both order their affairs accordingly. Both bodies occupy themselves with scientific education only, and leave pedagogic work to schools and schoolmasters. If, therefore, Professor M'Fadyean desires to have Veterinary Preliminary Examinations on an equality with Medical, he must follow the General Medical Council; that Council will certainly not follow him.

The truth is that Veterinary Examinations in England are not following the Medical, and this is quite clearly shown by the fact that the General Medical Council does not accept the low certificates of the College of Preceptors which are sat for at Camden Town. Therefore it cannot be boasted at that institution that its students are on a par, in point of general education, with the medicals. On the other hand, it is correct to say that a large number of the students who attend the Scottish Colleges are on an equality with the medicals—even the very latest. The favourite certificate in Scotland is that of the Educational Institute, and that certificate, as well as the examination preceding it, is dictated by the General Medical Council. We cannot in Scotland accept an inferior certificate—as is done in England—because our bye-laws say that we can accept only the Preliminary Medical Certificate for the time being. We are thus forced to hold our heads very high in

Scotland, and we do wish our English competitors would follow our example, instead of slouching along on a lower level. Mr. M'Fadyean rather shudders at our invitation, because, as he tells us in confidence, if he accepted it he would not get five students annually, and he asks us to come down to his quiet, comfortable obscurity. Mr. Dollar says that there are some forty other examining bodies whose certificates may be presented by candidates for admission to our ranks, but it would be difficult for the young Scot to find anything as reasonable as the certificates of the Educational Institute. Certainly the University preliminaries are more difficult, so are those of the Education Department.

The position seems to be this,—either the London people must adopt a higher standard, a standard equal to our Scottish one, and so cease to undersell us, or we must make terms with the enemy, and so give up all our pretensions—dethrone our divinity, shatter our idol, admit ourselves frankly inferior to our medical brethren, and let them wrest from us all the best appointments. But even if we allow the College of Preceptors to invade—and humiliate—Scotland, we must make a final protest, and that is, that as English methods of education, whilst equally good, are different from Scottish, so is the test which English institutions apply not equally fair to the two countries. In other words, after the glory has departed, the Scottish candidate will probably be the better man of the two, and no ingenious sophistries and subtle distinctions on the part of Professor M'Fadyean will do anything to prove the contrary or mend the matter, although they may help to confuse the issues and intensify the regret.

Royal College of Veterinary Surgeons.

A QUARTERLY Council Meeting of the Royal College of Veterinary Surgeons was held at 10 Red Lion Square, Holborn, W.C., on Wednesday afternoon, October 10th—Mr. A. W. Cope, President, occupying the chair.

The following Members of Council were present:—Professor Dewar, Professor Edgar, Professor James M'Call, Professor M'I. M'Call, Professor M'Fadyean, Professor Pritchard, Professor W. O. Williams, Messrs. Abson, Bower, Byrne, Carter, J. A. W. Dollar, Fraser, Hartley, Lawson, Mason, Mulvey, Simpson, Miller, Trigger, Wartnaby, Wragg, Thatcher (Solicitor), A. W. Hill (Secretary).

The minutes of the last meeting were taken as read.

The SECRETARY announced that apologies for non-attendance had been received from Colonel Lambert, C.B., and Messrs. Locke, Winter, and Barrett.

The SECRETARY read a letter from Mr. Banham, of Cambridge, drawing the attention of the Council to their very unsatisfactory, and he believed unprecedented, action in deciding the case of disgraceful conduct reported to the Registration Committee last November, which the Solicitor investigated in January 1900, and the Registration Committee considered in February. The charge was—"That a member was guilty of conduct dis-

graceful in a professional respect, in stating to a livery stable keeper that he had glanders in his stable, and in manipulating two skulls to support that statement, knowing it to be untrue, and for purposes of his own."

The Committee reported that they found the charge proved. The Council, however, took the exceptionally peculiar course of discussing the case, admittedly without a large number of the Councilmen knowing the real facts of the case. Moreover, the discussion assumed a particularly one-sided view, and many of the remarks made were totally misleading. The very paltry reason, namely, of fearing appeal to the Privy Council for not adopting the report of the Registration Committee, was in his opinion by no means becoming to nor dignified of the Council. He asked the Council to reconsider their decision on the case.

The SECRETARY also read a letter from Mr. Winter suggesting that the Council should re-open the case at its next meeting, as a good deal of doubt existed in the mind of the profession at large that justice had been done.

Mr. BOWER proposed that the case should be re-opened, for the reason that the Registration Committee, in whom the Council had every confidence, happened to be very small when the subject was brought forward, and he believed that they—justly in some people's opinion—found that the offender was guilty. He could say without fear of contradiction that half of the members of the Council did not know anything of the case when it was decided upon. Another reason for his contention was that the veterinary profession in the Eastern Counties was anything but satisfied with the decision arrived at. He thought in justice to all concerned the matter should be re-opened.

Mr. TRIGGER wondered in what court of law it would be considered justice if a case was re-opened that had been dealt with and a decision come to. He contended that the case was fairly considered. The jury which tried the case was so divided that the recommendation to deal with the man as a culprit was only carried by a majority of one. In England, when a man was tried by a jury for a serious offence, would a majority of one convict him? Certainly not. There must be a unanimous jury, and he ventured to say that if Mr. Banham's case went before any jury in England it would not unanimously convict the prosecuted man. There was such a thing as "not proven." If Mr. Banham had told the Council he was in the possession of strong additional evidence, there would have been some reason for re-opening the case.

He moved that the Council proceed to the next business.

Mr. LAWSON seconded the resolution, which was agreed to.

The SECRETARY read a letter from Professor Pritchard, acknowledging the Council's resolution of sympathy with the members of his family in their recent bereavement.

OBITUARY.

The SECRETARY read the obituary list.

Mr. MULVEY said that amongst the names just read was that of Sir Henry Simpson. He was for many years connected with the College, had acted as one of its examiners, and had been a member of the Council and the President. He was sure it was the wish of every member present to convey to the members of the late Sir Henry Simpson's family the extreme regret with which they had heard of his death.

Mr. WRAGGE seconded the motion, which was agreed to.

The SECRETARY announced the list of presentations to the library, and a vote of thanks was accorded to the several donors.

It was also agreed that the question of the disposal of the 900 books given to the College by Professor Fleming should be referred to the Library Committee for consideration and report.

FINANCE COMMITTEE.

The SECRETARY read the reports of the Special Finance Committee and the Finance Committee.

The Special Finance Committee reported that they had investigated the income and expenditure of the College for the last ten years, but were unable to complete their work owing to the magnitude of the subject. They suggested that the Committee should be re-appointed, with a view to further consideration and report.

The Finance Committee recommended that cheques should be drawn to discharge the outstanding liabilities, and recommended that in future the annual voting papers and reports should be issued in envelopes bearing a penny stamp.

On the motion of Mr. TRIGGER, seconded by Mr. MASON, the report was adopted.

REGISTRATION COMMITTEE.

Mr. SIMPSON read the report of the Registration Committee, and moved its adoption.

The report stated that the following recommendation from the Sub-Committee appointed to consider the question of the Veterinary Diploma granted by the Highland and Agricultural Society was received and adopted :—"That an Act has been passed placing holders of the Highland Veterinary Diploma on the same footing as other members of the veterinary profession, and will come into effect on the 1st of January next."

They recommended that a vote of thanks should be passed to Lord Tweedmouth for conducting the measure through the House of Lords.

The Committee also reported that several cases had been referred to the Solicitor, with instructions to obtain further evidence, and if deemed advisable to prosecute.

Mr. WARTNABY seconded the motion, which was agreed to.

EXAMINATION COMMITTEE.

Mr. MULVEY read the report of the Examination Committee, and moved its reception.

The Committee reported that a letter had been received from a student of the B Examination of 1896, asking that his papers be reconsidered by the Council.

The Committee instructed the Secretary to inform him that they were unable to comply with his request.

A letter was also read from a Class A student, who passed his examination in 1893, asking if he might be allowed to come up at the Christmas Examination 1900.

The Secretary was directed to inform him that in the event of a certain resolution being passed at that Council meeting he would be eligible, but if not he would be ineligible. The whole of the students' certificates were

carefully considered by the Committee, and with the exception of two were accepted.

The subject of Professor Dewar's motion was earnestly discussed, and the Committee, on the proposition of Professor M'Call, made the following recommendations :—

"That we have an examination of our own.

"That we appoint a Board of Examiners to conduct it.

"That we instruct that Board to make a standard which will conform with bye-law 52 in the Register."

The reports of the May Examinations in Scotland referred to the Committee were carefully gone through, and the Committee had no remarks to make.

Professor EDGAR inquired whether the members were asked to receive and adopt the suggestions in the report.

The PRESIDENT replied in the affirmative.

Professor EDGAR said he should move that the report be not accepted in so far as it related to the suggestions for the Preliminary Examination.

Mr. MULVEY explained that the recommendation of the Committee committed the Council to nothing.

Professor M'FADYEAN reminded the Council that they referred the subject with which the recommendation dealt to the Committee, and he thought it would be discourteous to the Committee if they were to refuse to adopt their report. Personally he did not think the Council would be committed to anything by voting in favour of its adoption. It embodied the views of what happened to be the majority of the Examination Committee.

Mr. SIMPSON said it appeared to him there could be no doubt about the interpretation put upon the recommendation. The Committee presented to the Council a recommendation, and said, "Do you accept it or reject it?"

Mr. DOLLAR could not agree with the views just enunciated by Mr. Simpson. He thought the relations between the Committee and the Council were as follows :—The Council had asked the Committee to deliberate on the question and to enunciate an opinion. The Committee had sent their opinion, and the Council accepted it only in so far as it was a written document. They did not, when they accepted the report, thereby bind themselves to formulate any new bye-law, or to take any steps to carry their recommendation into effect. In order to do that it would be necessary that a special bye-law be formulated, and suspended for three months, and discussed in the usual way.

In accordance with instructions from the Chair, Mr. MULVEY moved, and Professor PRITCHARD seconded, the adoption of the report.

Mr. DOLLAR asked what the meaning of "adopting" the report was. He understood that if the Council adopted the report it did not in any way bind itself to go further with the subject of the recommendation. He thought that was a common sense view, because in order to put the recommendation in force it would be necessary to amend several of the existing bye-laws, which must be done in the regular way by due notice being given.

Mr. MULVEY thought that in the event of the report being adopted, the Council accepted the principle, and would bind itself to proceed with it.

The PRESIDENT asked the Solicitor to give his ruling on the matter.

Mr. THATCHER (the Solicitor) said it seemed to him that if the report was adopted the Council approved of the principle therein contained, and in order that it might be brought into legal effect it would be necessary to alter bye-laws and to give the usual three months' notice. It was then quite open to the Council when that bye-law had been discussed to alter their minds, or for individual voters to alter their minds, and the effect after all might be that the law would never come into existence at all.

Professor EGAR thought it was perfectly unfair to spring such an important matter upon the Council when it did not thoroughly understand the question. He again moved that that portion of the report relating to the suggestion of having a Preliminary Examination of their own be not adopted.

Mr. DOLLAR seconded the motion.

Mr. VILLAR considered that if the Council accepted the report of the Committee it would not bind the Council in any way.

Professor M'I. M'CALL supported the Committee's recommendation.

The amendment that the clauses referring to the recommendations of the Committee be deleted was put and carried, ten voting for and nine against.

On the motion of Mr. MULVEY the report of the Examination Committee, with the exception of the two clauses just deleted, was agreed to.

STEELE MEMORIAL COMMITTEE.

The SECRETARY read the report, which recommended that Professors Dewar and Mettam be presented with the Steele Memorial Medals.

On the motion of Mr. DOLLAR, seconded by Professor M'FADYEAN, the report was agreed to.

REPORT OF THE COURT OF EXAMINERS OF THE JULY EXAMINATION.

On the motion of Mr. MULVEY, seconded by Mr. HARTLEY, the report of the examiners of the July Examinations, and all papers connected with them, were referred to the Examination Committee for consideration and report.

WALLEY MEMORIAL EXAMINATION.

The SECRETARY reported that four candidates entered for the Walley Memorial Examination, but only one gentleman from the Dick Veterinary College was present. He had received no report, and the papers were at present in the hands of the examiners.

APPOINTMENT OF SECRETARY FOR THE BOARD OF EXAMINERS IN SCOTLAND.

On the motion of Professor OWEN WILLIAMS, seconded by Mr. MULVEY, Mr. Rutherford was unanimously re-elected as Secretary for Scotland at the same salary at heretofore.

DATE OF FELLOWSHIP EXAMINATION.

On the motion of Mr. VILLAR, seconded by Mr. MASON, it was decided that the Fellowship Examination be held on Saturday, the 15th December.

AFFILIATION OF THE ROYAL COLLEGE OF IRELAND.

Mr. BYRNE asked if the body which moved the application for affiliation

sent with it any statement of the facilities that were provided by them for the proper education of the students being taken into the new College.

The PRESIDENT replied in the negative.

Mr. BYRNE said he contended rather unwillingly that it devolved upon the Council to satisfy itself that some satisfactory arrangement had been made for the education of students before they passed that affiliation scheme, that proper buildings, appliances, and suitable conveniences for the education of the students were provided. They had been told that there was such an institution, but no proof had been laid before the Council that there was any school of any sort. It was a serious matter that a school should be started without such assurance.

The PRESIDENT asked the Solicitor to explain the Council's position.

Mr. THATCHER quoted the 4th section of the Veterinary Surgeons Act, which said that the Royal College of Veterinary Surgeons was bound to make provision for the examination of the Irish students whenever a Veterinary College was established in Ireland, exactly in the same manner as they provided examination for the students in England and Scotland. A Charter had been obtained by the Royal Veterinary College of Ireland, in which a clause occurred which the Council must recognise as being higher in authority than any resolution it could pass, namely,—"We do further will and ordain that the said Royal College shall be affiliated to the Royal College of Veterinary Surgeons, London, in like manner as the present affiliated English and Scotch schools." So that the Charter itself was the affiliation, and the Council could not help themselves in the matter even if they wished to.

Mr. BYRNE submitted that the Charter and other laws of the country must be interpreted in the light of common sense. The Charter distinctly stated that students from such a College in Ireland should be examined when that College was established, and he contended that the mere fact of the Charter was not the establishment of a College. At the present moment, as far as any member of the Council knew, there was no Irish school, and the Council should not take upon itself the responsibility of affiliation until some proof had been given that the requisite facilities, conveniences, and appliances had been provided.

Mr. TRIGGER thought that Mr. Byrne's objection was easily met. The Council took very great care that no students who did not hold the necessary certificate would be allowed to present themselves for examination. Educational certificates would be demanded from the Irish College in exactly the same manner as they were now demanded in England and Scotland. He moved that the Irish College be affiliated in accordance with the Irish Charter.

Principal M'CALL seconded the motion, which was agreed to. Mr. Byrne voting against.

This concluded the business of the Quarterly Meeting.

SPECIAL MEETING OF COUNCIL.

At the conclusion of the Quarterly Meeting, a Special Meeting of Council was held for the purpose of considering, and if deemed necessary passing, certain alterations of the bye-laws of which notice had been given. The President, Mr. Cope, occupied the chair, and the following Members of Council were present:—Professors Dewar, Edgar, James M'Call, M'I.

M'Call, M'Fadyean, Pritchard, W. Owen Williams, Messrs. Abson, Barrett, Bower, Byrne, Carter, J. A. W. Dollar, Fraser, Hartley, Lawson, Mason, Mulvey, Simpson, Trigger, Villar, Wartnaby, Wragg, Thatcher (Solicitor), A. W. Hill (Secretary).

Mr. MULVEY asked and obtained permission to withdraw the following motion standing in his name, as the Council as its last meeting came to the conclusion that they intended to perpetuate the Dual Examination :—

"To amend Bye-law 53 by striking out the words 'after the 7th April 1895,' on the first line, and the words 'no Student at a recognised School, on or before the 30th January 1893, shall be affected by this Bye-law,' on the last two lines.

"To amend Bye-law 54 by striking out the words 'after the 7th April 1895,' on the first line, and the words 'but a Student at a recognised School, on or before the 30th January 1893, shall, during his academical course, be subjected to and pass the Professional Examinations only,' on the last four lines.

"To strike out the words 'as to Examinations after 7th April 1895, but not applicable to Students admitted before January 1893,' in the Register between Bye-laws 59 and 60.

"To amend Bye-law 73 by striking out the words :—'The foregoing Bye-laws, 60 to 72 inclusive, shall not apply to,' on the first and second lines, and the words 'but such Student shall be subject to the old regulations which are set out in Schedule 3,' on the three last lines, and adding the following words, 'shall be subject to the foregoing regulations with the following variations :—If he shall have passed his First Professional Examination only under the late three years' course then he shall be subject to Examinations 'B,' 'C,' and 'D' in due course. If he shall have passed his Second Professional Examinations under the late three years' course then he shall be subject to Examinations 'C' and 'D' in due course. If he shall have passed the Oral portion of the Third Examination in the late three years' course then he shall be subject to Examination 'D' in due course.'

"To strike out the Third Schedule.

"The foregoing Bye-laws to come into force on the 1st of November 1900."

Mr. TRIGGER also asked and obtained permission to withdraw the following motion :—

"No Examination shall be held in any class at any centre unless at least six candidates are eligible and present themselves for the Examination to be held at such centre."

STANDING ORDERS.

Mr. DOLLAR brought forward certain standing orders, fifty in number, for the regulation of meetings of Council, copies of which had been already circulated. In moving their adoption he pointed out that they were an attempt to codify what had been from time immemorial the practice of the Council. Almost every standing order on the paper had been utilised and put in practice more or less frequently by the Council at one period or another of its existence. The advantages of codifying the standing orders

scarcely required to be set forth. He need only point out that they insured regularity in the transaction of business, that they prevented misunderstandings between members as to their privileges, and as to the manner in which particular propositions and business should come forward to be transacted. A study of them would enable any person to know immediately on his entrance to the Council exactly the manner in which business was conducted, and it would enable any member who had once mastered them to enter on his duties as President without difficulty and with satisfaction to the Council and to himself. He might point out that standing orders were a form of regulation found in every public assembly in the country and in many of those abroad, from the humblest Boards of Guardians to the highest legislative bodies. They were found in a very exemplified form in the County Council, and in such bodies as the Royal College of Surgeons, the Royal College of Physicians, and the General Medical Council. He would read what was said on the introduction of the standing orders by Mr. Simpson, who had held very weighty offices, and to whose opinion considerable importance was attached, and by the late President, who was equally distinguished. Mr. Simpson on his (Mr. Dollar's) proposition that the Parliamentary Committee should draw up standing orders said, "I beg to second that. It has for many years occurred to me that it is very necessary. The Chairman for the time being is put into an uncomfortable position because he has to rule what in his opinion is the correct method of procedure. If we have these standing orders for our guidance I think the business of the Committees and of the Council, short as it has been to-day, will be got through in a much shorter time." The opinion of the then President (Mr. Mason) was in the same spirit. He said, "I think this is one of the best things that I have heard since I have been a member of the Council." After so warm an expression he contented himself with simply moving that the standing orders be adopted.

Professor EDGAR, in seconding the motion, said he had had the pleasure at the previous meeting of Council of objecting to the standing orders being so summarily expunged from the Council. He hoped they would be treated with more courtesy on the present occasion.

Mr. SIMPSON said he freely acknowledged that he was the seconder of a resolution made by Mr. Dollar with reference to the drafting of standing orders for the guidance of the Council, and more particularly of its President; but he never for one moment thought when he expressed that approval that such a document as the present was going to be presented, not for the guidance of the unfortunate President, but for his confusion. Seeing that comparatively so few meetings of the Council were held during the year, the President, unless he was a very exceptional man and had nothing else to think of but the business of the College, would have very great difficulty in replying without reference to that volume when he was appealed to on a point of order. He still repeated that he was in favour of standing orders which were not repetitions of their bye-laws and charters, but he was not in favour nor should he vote in support of the adoption of that volume.

Professor M'FADYEAN, in strongly supporting the resolution, thought he had never heard a weaker defence of what appeared inconsistent action than that made by Mr. Simpson. In that gentleman's presence he charged him with some decree of exaggeration in describing the comparatively

small set of regulations as a volume. He was sure the members of the profession who read the report of his speech when it was published would call up a picture of what was much more formidable than that collection of seven pages of bye-laws or rules, all of which referred to circumstances which were of almost daily occurrence round that table. If he might support his own action in the matter with reference to the question, he would simply take what had already occurred at that meeting. Nearly half an hour was spent in determining what was the proper procedure with regard to the acceptance or rejection of a particular recommendation from the Committee, and the whole Council seemed to be at sea on the matter. (No, no). He also demurred entirely to the statement that the effect of the adoption of these rules would be the confusion of the Chairman. He was afraid they had too often seen a Chairman appealed to who was undoubtedly in a state of mental confusion, and who did not know what he ought to do in particular circumstances. It was because they desired there should not be confusion on the part of anybody that they thought it wise for the Council to adopt those standing orders.

Professor PRITCHARD thought he could lay claim to being the only one in the room on a certain occasion who objected to the standing orders, and he recollected making use of the expression that "the rules of the House of Commons were good enough for him and ought to be good enough for the Council." He objected to the introduction of any particular standing orders that were not running parallel with those adopted by all the principal Councils and great ruling meetings of the country, and if they wanted a separate set of rules he thought they must be an extraordinary congregation of people. He objected to the adoption of the standing orders.

Mr. DOLLAR replied that the proposed standing orders were strictly parallel to those of other bodies, and whenever points of doubt had arisen they had been resolved by reference to Palgrave's Work called the "Chairman's Handbook," the Hon. Reginald Palgrave being accepted as the highest authority on procedure in the kingdom.

Mr. TRIGGER said he should steer a middle course between Professor M'Fadyean and Mr. Simpson. Having read the proposed standing orders, he had come to the conclusion that they were carefully thought out and very desirable. He then referred to his register, and read the bye-laws all through, and had decided in his mind that they would be very desirable if the College possessed no bye-laws. He threw out the suggestion that if the members carefully studied the bye-laws they would have very little difficulty in carrying out the business of the Council. On those grounds he should vote against the adoption of the motion, as it tended to confusion.

Mr. WARTNABY expressed a similar opinion.

Mr. DOLLAR, in reply to Mr. Trigger's argument that the standing orders would be desirable if there was no bye-laws, pointed out that the standing orders had been drawn up with full cognisance of the fact that they had bye-laws which, by a process only too common in drawing up up bye-laws, had been placed there when, in point of fact, they should have been placed under the heading of standing orders. Those bye-laws had been incorporated, and the immediate result of passing the standing orders would be to necssitate a notice being given for the deletion of the bye-laws which were incorporated. The reason why certain bye-laws had been in-

corporated in the standing orders was, that it was necessary at times, at short notice, to move a suspension of certain rules which governed the conduct of the Council, and if one of those particular rules happened to be a bye-law, it meant that, to act legally, the discussion of the particular subject must be adjourned for three months, in order that the special bye-law might be suspended or entirely rejected. That difficulty would be got over if the standing orders were adopted, and if occasion arose which rendered it necessary to act at once, the Council would no longer be hampered by the fact that what ought to be a standing order was a bye-law. Before concluding, he reminded the Council that those bye-laws were for the space of a whole year carefully considered by a very influential Committee, at which most of the gentlemen who had made objections were present. At the time the standing orders were under discussion, they had every opportunity to advance their objections. What he asked the Council to pass today, was not any work of his that he had evolved from his inner consciousness, but it was the work of the Committee, of which some of the gentlemen who now objected were the chief and shining lights. Therefore, he thought it a little illogical, after a discussion which had extended over a whole year, for these gentlemen to make objections now, and he could not help thinking that those objections were less founded upon conviction than perhaps on motives, which under the circumstances he should not wish to emulate.

Mr. SIMPSON said that he opposed the standing orders in Committee.

Mr. MULVEY said that he too protested against them.

The motion that the standing orders be adopted was then put and lost, 9 voting for and 11 against.

MOTION BY PROFESSOR DEWAR.

Professor DEWAR moved the following resolution:—"To amend Bye-law 52 by the deletion of the words 'as on June 30, 1896.'"

He thought there could be no doubt that a mistake was made when the Council extended the curriculum and raised the educational test of the student's fitness to study for his profession in fixing on a hard and fast list of existing examinations, the passing of which would qualify a student to enter for his Professional Examination as if the examinations were fixed and unalterable. The ink was scarcely dry on the bye-law before alterations were taking place. He confessed he did not foresee the manner in which those changes would occur, changes undoubtedly which time inevitably brought about. The motion, first proposed by Professor Edgar at the Council's meeting in 1896, or rather the bye-law as it would read if his motion was accepted, he wished to remind the Council was seconded by Mr. Penberthy, supported by Professor M'Fadyean, Mr. Mulvey, Mr. Dollar, and others. In order to recall it a little more clearly to the minds of the Council, he might state that the meeting came to a somewhat heated termination, owing to the proposal to adjourn the discussion of the motion being adopted, so that there should be a fuller consideration by the Council. A number of gentlemen who wished to show their indignation enforced their ideas by almost tumbling over each other to resign their positions. That was simply because the meeting was only postponed for fuller consideration. At the July meeting, after what occurred then, he was surely justified in looking for the cordial, not to say

enthusiastic, support of those gentlemen to his motion. At the July meeting, the one succeeding the meeting he had referred to, and after the most exciting elections of recent times, at which meeting Professor Edgar was not present, Veterinary Captain Butler proposed as an amendment to Professor Edgar's motion that the words "in 1895" should be added. After considerable discussion, the motion was passed in the form in which it now stood in the bye-laws as bye-law 52. These words, "on June 30th, 1896," soon resulted in causing an injustice to the Scotch Schools, and by refusing to remove what was intended to alter or modify that bye-law, the Council—he did not say intentionally—had continued to perpetrate an injustice. Assuming that they were practically agreed that a grievance existed, the only question for discussion was the best way of removing the grievance. When they accepted in 1892 the certificate of the examinations mentioned in the first schedule, the examining bodies selected by the General Medical Council, they practically accepted that Council as dealing fairly by the different divisions of the kingdom. The injustice had arisen through the different wording of the names of the individual examinations. In naming the College of Preceptors examination in the schedule, no reference whatever was made to medicine or medical subjects. The examination of the Educational Institute of Scotland was described as the Preliminary Medical Examination. This had been the cause of all the trouble; the one must be the Preliminary Medical Examination, the other might not be and need not be its equivalent. Since 1896 the General Medical Council had repeatedly raised the standard of its examinations, and the examination of the Educational Institute of Scotland, being one of them, had undergone repeatedly this raising of its standard, the result being that the examination of the College of Preceptors, not being connected by name with the Preliminary Medical Examination, had remained practically in the standard of 1896. The result was that the General Medical Council had dropped that particular examination of the College of Preceptors which veterinary students usually took as not being of a sufficiently high standard to qualify for medical registration. He wished to point out the extent of the difference, the extent to which the standard had been raised. Under bye-law 52 at the present time a certificate of having passed the second class second division of the College of Preceptors was held as satisfying the requirements of the Preliminary Examination. But the General Medical Council no longer accepted that examination as qualifying for medical registration. They did not even accept the second class first division. There was a difference between the two divisions of 150 marks; 550 marks or over being required for a second class second division certificate, whilst 700 or over were required for the first division. He wished to call the attention of the Council to that matter, as, according to the General Medical Council, not a small difference existed between the College of Preceptors' examination and that of the Educational Institute of Scotland. A first division certificate of the second class was not accepted by the Council, although that was 150 marks higher than the certificate accepted by the Royal College of Veterinary Surgeons, but insisted on a first-class certificate, a certificate only obtained by passing a different examination altogether. He need hardly point out that the General Medical Council still accepted the examination of the Educational Institute of Scotland, and to that extent this body—which had all along been accepted as a guide in the matter of Preliminary Examinations

—estimated the difference between the two examinations. It might therefore be assumed that the difference between a second class first division certificate and a first-class certificate would be as great as the difference between the two divisions, or another 150 marks, which meant that 300 marks out of a total of some 850 would represent the difference between a second class second division certificate of the College of Preceptors and the certificate of the Educational Institute of Scotland. It might be remembered that his first efforts to remove this grievance were directed to obtaining for students an examination on the standard accepted by the Council in July 1896, which was denied to them. For these efforts he got less than credit. He had been reproached as being actuated by sinister motives, with wishing to debase and lower the standard of the Preliminary Examination. Surely those gentlemen ought to acknowledge their mistake now. (Hear, hear.) However, he hoped they would now assist in removing this difference, and in obtaining as uniform an examination for each student as possible. He had ceased attempting to get redress in this direction; he had ceased to hope or even to desire that the Council should adhere to the standard of 1896. "Time and tide wait for no man." The general education of the community would go on improving, and if their profession did not go on it would soon drop behind in the general advance. At present they could ill afford to lose any of the advantages gained, when the sister profession was pushing so hard in the pursuit of those appointments connected with public health, sanitation, and meat inspection, which were claimed by members of their profession. They ought not to abate their endeavours to maintain and even improve the status of the profession, and one of the best means of furthering this object was to be enabled to continue the proud boast that veterinary students were required to pass the same educational test as medical. Probably the objection was that the state of their finance would not allow changes, that the entry of students into the schools had been diminished until they would soon have to face the question of reducing the standard, instead of raising it; but he denied that his proposal would raise it one fraction as far as Scotland was concerned. It had already been raised, and his friends of the London College could not object to the students being called on to pass an examination on the same standard—an examination equivalent to that for students in Scotland. It had been proposed that they should have an examination of their own, and the idea was rather flattering to their sense of their own importance. Whilst he should not like to say they were unable to formulate an examination, or even to carry it out to a satisfactory conclusion, yet some educational body would be required to conduct it for them. It would require constant attention, periodical alteration, and would also, he was afraid, press to some extent on the funds of the College. He might be wrong, and he hoped he was. But, what was far more important, they would lose that position and that prestige which had already been gained by requiring students to pass the same examination as the medical student. That would be avoided if they had an examination of their own, and got the General Medical Council to accept it as qualifying for medical registration, but there was not much hope of that. Any examination which they tried to frame must be on the lines of some of those mentioned in the first schedule, and would require one of those educational bodies to carry it out, or otherwise it might be open to abuse, or at least to mistrust and suspicion. In accepting his motion the

Council would no doubt be adopting the wisest policy. Looking to the fact that they were still struggling to obtain that public recognition which they deserved, which was coming, although slowly, and which would take time before it was in proportion to their desires; when they saw those offices he had referred to, and which they were inclined to think ought to be filled by members of their profession, being filled by medical men and others, it was not a time to relax their efforts to advance and improve their profession. Even assuming that the adoption of the motion might raise the Preliminary Examination in England, it would be a mere flea-bite to the alteration that took place when they extended their curriculum. If they, so to speak, swallowed the camel of the raising of the standard then, it was absurd to strain at the gnat implied in his proposal, especially if by the acceptance of the resolution uniformity was obtained in the Preliminary Examination. He thought there was little fear that the number of men entering for the profession would go on increasing. If a healthy demand continue for well-educated, scientific, veterinary surgeons, there was little doubt that the demand would soon be met. The increase in the Preliminary Examination in 1893 was so great, and the number of rejected candidates so overwhelming, that the change was severely felt; in fact it was self-evident. But no member of the profession keeping in touch with its politics could for years have been expecting to get his pupil or son to enter the profession by passing a lower examination than what had hitherto been accepted. He need hardly remind the Council that this was his fourth attempt to redress this grievance, and he hoped it would be the last. But even if he be unsuccessful, he would not relax his effort to obtain justice. However, he trusted the Council would accept his motion, and that all would work harmoniously and earnestly for the good of the profession, to maintain and improve its status and position, and increase that respect which was already held by a discerning public. He moved that the words "On June 30th, 1896," at the end of bye-law 52, be deleted. (Applause.)

Professor EDGAR seconded the motion.

Mr. MULVEY desired to acknowledge the way in which Professor Dewar had laid his clalms before the meeting. At the same time he did not agree with all that he had said, and was unable to support the motion. Most of those present were aware that for the last five years the number of students entering the Colleges had gradually grown smaller. If Professor Dewar could convince him that by increasing the education examination of the students it would aid one student to enter one of the Colleges, then he would have great pleasure in supporting the motion.

Mr. VILLAR said Professor Dewar had several times made use of the expression "assuming we are perfectly agreed." I ventured to think the Council was perfectly agreed on one point, and that was, that it was unfortunate, after having so recently passed bye-law 52, that they should now be called upon to consider the whole of the Preliminary Examinations. They were placed in an unfortunate posttion by discussing these questions, because there seemed to be an utter discord amongst the representatives of the school and the Council as to what was the proper course to take. The question occurred to him :—Are the students at the present time admitted under the bye-laws sufficiently educated? and he thought the answer could only be that they were. It was true that at present students were admitted under the certificate of the second division of the College of Preceptors, provided it contained all the subjects required, and provided

the examination was passed at one and the same time. Since that standard had been accepted the standard of the medical profession had been raised, for now the first division certificate of the College of Preceptors was insisted upon instead of the second. Of course the certificates of the Educational Institute of Scotland were accepted. He thought that the very fact of the medical profession refusing the second division certificate of the College of Preceptors, and accepting the certificate of the Educational Institute of Scotland, was proof that the two examinations were not actually on a par. Therefore some alteration must be made, but if Professor Dewar's suggestion was accepted, and the standard of the examinations was raised, he ventured to think they would be doing harm to the profession, harm to the student, and harm to the teaching school. The men at the present day had to pass a stiff examination, which included two foreign languages, a knowledge of the first three books of Euclid, of algebra, and quadratic equations, and was an education which would render a man capable and able to go into any society. In addition to that, it required an ordinary lad gifted with ordinary intelligence to be at school until he was seventeen years of age before he could pass that examination. If a higher examination was insisted upon he would have to have another twelve months at school, which would mean that a boy at eighteen would have to leave school and go straight into the Veterinary School. He would draw attention to a report of the professional examiners from the Chairman of Class D Examinations. He said:—"We found the standard of the student quite up to the average, the failings being, as usual, more in the minor details of everyday life of the animals concerned than in pure questions of disease." If they insisted upon lads going to school until they were eighteen, and then going straight to College, the lads were turned out with their diplomas at twenty-two years of age without having any opportunity whatever of getting a practical knowledge of the details of animal life. He maintained that the standard that was sufficient five years ago for the medical profession was quite sufficient for them now, and for veterinary students, and therefore begged to propose a direct negative to Professor Dewar's motion.

Mr. DOLLAR pointed out that the words Professor Dewar proposed to delete would leave bye-law 52 in such a state that it would oblige them to follow whatever changes the General Medical Council might inaugurate, and force them to make those changes at whatever time the General Medical Council might make them. The passing of the resolution would leave them with a standard in which the time of change and character of the change would be absolutely uncertain. The consequence of that would very soon become evident. It was unlikely that the medical profession would lower their standard, and the result would be that their standard would be raised to such a height that it would be impossible for veterinary students to pass it, or at least very few of them. He strongly objected to these attempts to alter the standard. At the election to which Professor Dewar referred, the question was very thoroughly thrashed out, and a large number of those persons who were returned gave definite pledges. They were returned pledged to maintain the standard as it then existed, and he saw no reason for those who made that promise to depart from it. It had been said that inasmuch as the medical profession had altered its standard, one of the certificates—the Educational Certificate of Scotland—was no longer available. That to his mind was not an objection which justified

them in making so momentous a change as that contemplated by Professor Dewar, because there were at least forty other certificates from which the Scotch Colleges could make a choice, and surely some attempt should be made by them to find among those forty odd other certificates one which would meet their views and desirabilities of the matter.

Professor OWEN WILLIAMS had already stated that he had no objection to the severity of the examination of the Educational Institute of Scotland, for he was a strong believer in students entering college with a thorough education. There were three schools in Scotland, and one in England, and the only examination which was convenient to new students in Scotland was the Educational Institute of Scotland examination. If the students did not sit for this examination, thinking it was too severe, then they were induced to sit for the College of Preceptors examination in London, which was confessed by the Medical Council to be an inferior examination to that held in Scotland. As a result, when parents determined to send their sons to College, if those sons did not happen to have any certificate, which they might have got in the ordinary course of their education, if they suddenly determined to become veterinary students, the inducement was to select the easiest examination. The easier of the two convenient examinations was that of the College of Preceptors held in London. Consequently parents sent their sons to London to be examined, and the inclination of the sons or of the parents was for the students to remain in London to pursue their studies. It would be a difficult matter for the Council to have men sent to Scotland, and tell them, "The Educational Institute examination, which is a difficult one, though a convenient one, is not advisable to take; much better stay for your examination in London." The students did not come from England to Scotland to pass an examination, but were sent to England to pursue their studies. The Preliminary Examination was easier here than in Scotland, and, to use a vulgar phrase, this was "a draw" to the London Veterinary College. He therefore supported Professor Dewar's motion.

Professor M'FADYEAN could not help thinking that Professor Williams and Professor Dewar had credited some of the members of the Council with possessing exceedingly bad memories. Professor Williams had given them to understand that the students who desired to pursue their veterinary studies in Edinburgh must either present themselves for the Educational Institute examination, or they must sit for the College of Preceptors examination in London. He protested against trying to make things appear in that light, since Professor Williams must be fully aware that the College of Preceptors had expressed their readiness to examine intending veterinary students in Edinburgh whenever it was asked for. The College of Preceptors had actually held branch examinations in Edinburgh. It was quite free to hold branch examinations in Edinburgh and in Glasgow on the same terms as a branch examination was conducted in the Royal Veterinary College. Professor Dewar had said that possibly all were agreed that there was a grievance. That, he thought, was a very rash presumption. He would endeavour to state what the exact extent of the injustice under which the Scotch schools at present laboured was, and if he was wrong no doubt Professor Dewar would put him right. There obviously was no question of injustice as regards the severity of the examination, as all the examinations on the list were equally open to all the schools. Professor Dewar said the injustice lay in this, that he had a perfect right to demand

that students who intended to study in Scotch Colleges should have an examination in general knowledge conducted by Scotchmen. That was the whole grievance under which the students at present laboured. Professor Dewar had himself said that the examination by the College of Preceptors for a second-class certificate was of an easier grade than the examination of the Educational Institute of Scotland as at present conducted; but it hardly harmonised with the view that he (Professor Dewar) interviewed the officials of the College of Preceptors, and asked them if they would conduct examinations in Scotland in the event of the Council refusing to allow the Educational Institute of Scotland to conduct a special examination for his students on the abandoned grade. He would not presume to offer any advice to Professor Dewar as to what he ought to do, but he would never have felt himself obliged to refuse an easier examination than another because it was not conducted by Scotchmen. So that the only grievance was that the Scotch Colleges had not got an examination of the same grade as a second-class College of Preceptors examination conducted by Scotchmen. It was for the Council to decide whether they would gratify that desire on the part of the Scotch schools. Having defined the extent of the grievance, he would like now to consider the effect of the remedy. Professor Dewar had not disguised the fact that to pass his motion would be to increase the severity of the standard in England and in Scotland. Professor Dewar had chosen to ignore the fact that the students in Scotland might at present, if they liked, present themselves for the College of Preceptors examination, and that, as a matter of fact, was done by many of them. It was an entire illusion to imagine that all the Scotch students came with certificates from the Educational Institute; quite a very considerable proportion of them came with second-class certificates from the College of Preceptors. There could be no doubt, if the experience of the past was any guide to the future, that to pass the motion would be to diminish the number of students at present entering by 50 or 60 per cent. With regard to the results of the examinations of students in London by the College of Preceptors, he had on a former occasion pointed out that not more than 30 per cent. of the students presenting themselves managed to get a second-class certificate, and that if the students were bound to bring a first-class certificate, then they would not get five students annually. Professor Dewar said that when the present bye-law was passed the ink was hardly dry before the General Medical Council altered their regulations, and he said they had repeatedly altered them since. Had he any assurance that they would not alter them to-morrow? Were the students to be at the mercy of the General Medical Council in the matter? Or, what was far more serious than that, at present there were in the London Veterinary College, and he knew there were in the Scotch Veterinary Colleges, students who joined with second-class certificates—were the Council going going to pass this motion and disqualify the certificates of men who, on the strength of their public regulations, had come in with them as sufficient? It was a monstrous suggestion. When the standard of the examination was raised before, several years' notice was given, and he ventured to think the Council would never do such an injustice as to raise the standard without giving notice. He was as much in favour of high education as anybody, and if in the course of a few years the numbers entering the schools began to approach those that were common ten years ago, then he would be in favour of raising the standard again. In the meantime he thought it would be madness.

Professor WILLIAMS wished to correct a slight misunderstanding. Professor M'Fadyean had stated that the College of Preceptors were willing to examine students in Scotland, but he had it from the Secretary of the College of Preceptors himself that they would hold an examination if the Council paid a fee so as to guarantee that there was a sufficiency to pay their representatives, which meant that each College would have to pay three to five guineas for having an examination in Scotland, making the examination more expensive. That would have to come out of the pockets of the teachers of the schools.

Professor M'FADYEAN asked what the special fee was that was demanded. He believed it was a fee of 30s. in addition to the fees of the students, and those were the terms upon which the examinations were conducted in London. The Secretary of the College of Preceptors had assured him in writing that branch examinations in Edinburgh and Glasgow would be conducted on the same terms as in London.

Professor WILLIAMS said three guineas was stated to him.

Mr. BARRETT said he was very loath indeed to support the amendment, because he held now, as he held some years ago, that at any rate the Preliminary Examination was quite difficult enough for the veterinary student to pass. He was surprised at the line of argument which had been taken by Mr. Dollar and Professor M'Fadyean. They had tried to frighten the Council because the examinations were already too severe.

Professor M'FADYEAN (interrupting) denied that he had ever said that the examinations were too severe.

Mr. BARRETT appealed to the chair for protection from interruption during his speech, and sat down.

Mr. SIMPSON said it had always been a proud boast of theirs, individually and from the College, when making representations to bodies where they desired proper recognition, that the veterinary student, so far as education was concerned, was on an equality with the medical. He understood that it might be inadvisable to alter the bye-law in exactly the way Professor Dewar had indicated, because if his motion terminated with the word "student," it would necessitate that they should follow the medical profession, however unable they might feel in the future to do so. He would suggest to Professor Dewar that the words "at this date" be adopted after the word "student," for that would at any rate fix it until another great move was made by the medical profession. It would not do to let it go forth that the reduction in the number of students would amount to 50 per cent.

Professor M'FADYEAN said that what he thought he said was 50 per cent. or more. He also said, that if the students had to bring a first-class College of Preceptors certificate they would not get five students.

Mr. SIMPSON said that at any rate Professor M'Fadyean would look forward to a very large reduction. That was not an admission the veterinary profession should make, and he did not think it spoke well for the attempt on the part of the profession to raise the standard. He personally was very little interested in the matter, although many of the gentlemen were very seriously and honestly interested.

Mr. BARRETT felt, after having heard what he had, that he was justified in expressing his views. He wished to express his surprise that Mr. Dollar and Professor M'Fadyean at this stage should argue against the examinations following those of the General Medical Council, because

only a few years ago both gentlemen were strenuously working to raise the standard.

Professor M'FADYEAN submitted that it was high time to correct an absolute misrepresentation, for he was sure Mr. Barrett did not wish to misrepresent anything. He defied any one to quote anything bearing out the statement made by Mr. Barrett, that it was his wish to follow the General Medical Council with regard to the matter of general education.

Mr. DOLLAR said there was a way for Mr. Barrett out of the difficulty, either to prove that his statement was correct, by producing the book in which it occurred, or to withdraw it.

Mr. BARRETT said he was going to substantiate his statement, if he were permitted to speak. Bye-law 52 was passed chiefly owing to the action which Professor M'Fadyean took at the date of the passing of it. Professor M'Fadyean had argued over and over again that he desired that the Preliminary Examination of the veterinary student should be precisely on an equality with that to which the medical student was subjected.

Professor M'FADYEAN said that was a different statement. At first Mr. Barrett had said that he (Professor M'Fadyean) was desirous of following the education of the General Medical Council.

The PRESIDENT thought Mr. Barrett had better withdraw that statement.

Professor M'FADYEAN submitted it was a very important difference.

Mr. BARRETT said Professor M'Fadyean had argued over and over again that he would expect the Veterinary Preliminary Examination to equal that of the General Medical Council.

Professor M'FADYEAN again denied the statement. He thought he was entitled to demand evidence of it.

The PRESIDENT thought Mr. Barrett ought to be able to substantiate the statement.

Mr. BARRET had not anticipated that this special line would be taken by his friend, and therefore he had not come prepared with the speeches which were delivered.

Professor M'FADYEAN thought Mr. Barrett might accept his denial that he made such a statement.

Mr. BARRATT then withdrew the statement. Continuing, he said he had not risen that day with the view of supporting Professor Dewar, because he could understand that the motion was a very important one, and the time had not come when the Council could ordain a higher or a more severe examination for veterinary students. He was struck with the important fact, that the General Medical Council in their wisdom had said that the second division College of Preceptors examination was not severe, but the altered Institute of Scotland examination was. He cared not which school was affected by the education regulations, but what he did care for was that all the Colleges should have a fair chance, a fair field, and a fair fight, and then let the best man win. He was struck with this fact, that the students who desired to enter the Scotch Colleges had to submit to what they said was a higher examination than the second class College of Preceptors. Not only did the Scotch students say so, but the General Medical Council also did, and therefore it was the duty of the Council to consider the matter, and if possible to pass some order which would place the students on a condition of equality. He would deal with the point as to the College of Preceptors. Professor M'Fadyean said the Scotch students could be examined in Scotland by a gentleman

who would represent the College of Preceptors. He submitted that was not altogether a satisfactory mode of examination. If he had his will, he would not have a preliminary education examination in any of the schools at all; he believed sometimes there was not the supervision there. When he was examined there was a very lax system prevailing, and it was not at all impossible for a man to secure information from his neighbour and so pass the requisite standard. He did not say that was so to-day. He thought the Council ought to consider the matter because there was a manifest falling off in the number of students who are entering the schools. He did not think they were passing enough for the community generally, and on that account chiefly he should vote against the motion. He thought the teachers who came from Scotland would, if they were wise, present some motion which could be accepted, and which would do justice to them, and at any rate give the students an equality. He was convinced there was something wrong with this Scotch examination; he was convinced that the examination of the Educational Institute of Scotland was more severe than the second class College of Preceptors, and he could not see any reason, having regard to all the circumstances, why the Scotchmen should be compelled to submit their students to an English examination. He was not going to advocate any measure which would lower the stadard, and he should vote against any measure which would raise it. But they should be fair to the Scotchmen, and if one examination was proved to be stiffer than another they ought to have an examination instituted which would meet with the requirements of the case. In conclusion, he wished to say he was sorry if he had misquoted Professor M'Fadyean and Mr. Dollar, and hoped he had not said anything offensive to them.

Professor EDGAR reminded the Council that they were before the public, and it behoved them to act, as they were advised in the letter put before the Council earlier in the day, in an unbiassed way. If the discussion were narrowed into a focus it would be found that it had drifted chiefly into a sentimental argument in favour of certain examination certificates, and the position of certain schools. First of all he would say that as the governing body of the profession their first duty was to the public; secondly, to the profession; thirdly, to the aspirants of the profession; and fourthly, to the schools. The schools had been exalted into the first place, and they had been asked to look into the question of what would be done if the students diminished in number by such a severe test as was proposed. He contended that the proposed alteration by Professor Dewar did not increase the severity of the examination one whit. They had concluded that the College of Preceptors and the Educational Institute of Scotland were the two examination certificates with which all students could enter the veterinary or medical profession. But supposing those two certificates were cast to the winds, would any gentleman contend for a moment that the preliminary junior education test of the great Universities was too high for men who aspired to be graduates of the veterinary profession. At the present moment the admission examination to Oxford, Cambridge, Edinburgh, Durham, and almost every university in the country, would qualify a young man to enter as a medical student. Yet all the argument which has taken place that day was centered on the awful calamities which would come upon the profession if it through overboard the College of Preceptors. Any one who had investigated the subject knew that the first-class College of Preceptors certificate was more difficult to obtain

than the Junior Oxford or Cambridge Local. They were told that a Scotch student could not come right down to the South. There were great education centres in the north of England, if they chose to have the Oxford and Cambridge Local. The great centres in the North of England were fitted better than London itself for those education tests if they chose to adopt them. He contended that it was fictitious to suppose that the Council, by deleting the words suggested in Professor Dewar's motion, would increase the severity of the examination. Men could be students by passing either of those local examinations which any London, Liverpool, or Manchester merchant would expect of his clerk, who came to him at sixteen or sixteen and a half years of age. (No, no.) He had been accused of folly in the matter, but he asked them to look down the list in the *Times* of those who passed the Junior Oxford and Cambridge examinations, and to see the number of children who had been successful in them in every city and town. It would not be impossible for him to put his hand on plenty of boys in England who were only going into simple careers in merchants' offices who could pass those examinations, and yet forsooth if a man went into the veterinary profession he could not pass that examination for entrance into it! It was said that it would cripple him for life to get an Oxford or Cambridge local certificate, and yet they were claiming for veterinary surgeons, when occasions arose, a position of equal dignity with a medical man, and that they should be regarded as English gentlemen, and have titles corresponding to English officers and English gentlemen, and that they should thereby have a portal to the Court and any society. But when it came to the simple test of an educational standard the veterinary surgeon, poor boy! must stand out in the cold. He said that the men who were training the future veterinary surgeons were fools to thus handicap their boys. Looking at the matter from another standpoint, the main arguments which had been adduced against the proposal had been on the paucity of veterinary students. The paucity of veterinary students was not explained by the matter of the preliminary education alone, for the Agricultural Colleges, the Pharmaceutical Society, and the clerical profession were all suffering to-day under just the same paucity of students. The answer lay deeper than the Entrance Examination. It was not that which frightened men. If a father determined that his boy should be a veterinary surgeon or a doctor the Entrance Examination would not frighten him. As Professor Dewar had said, if the necessity were put before the men they would rise to it. The solution lay further back. The present was an age of the greatest prosperity the country had ever seen, and the veterinary profession, the church, the agricultural profession, and pharmacy did not offer remuneration for the outlay which trade did at the present moment. But if they waited until depression in trade occurred, he was positive there would be an influx of students to their doors. Mr. Mulvey had said that if Professor Dewar could prove that raising the standard would add one student to the numbers he would vote for it. Why, Mr. Mulvey could not look beyond his own nose! They had to legislate for the future and for those young men who were coming on, and not consider so much those who had to a certain extent gone on the road. He asked them not to look at their own interests in deciding such great matters, and he hoped for the credit of the profession that Professor Dewar's motion would be adopted.

Professor DEWAR in reply said it had been contended that he wished

for an examination conducted exclusively by Scotchmen. He did not want anything of the kind. He simply wanted a Scotch examination, which was a different matter altogether. What he demanded as a right was that there should be an examination for their students in Scotland by a Scotch educational body.

Professor Dewar's resolution was then put to the vote and resulted in a tie, nine voting for and nine against.

A second show of hands was taken with the same result.

Professor M'FADYEAN asked whether the effect of Professor Dewar's resolution would be to disqualify students who were now in the Veterinary Colleges on the basis of the second class certificates of the College of Preceptors.

Mr. FRASER said that surely Professor M'Fadyean did not suggest that the resolution should be retrospective.

Professor M'FADYEAN asked whether the College would be able to accept a certificate presented to-morrow.

Mr. THATCHER (Solicitor) thought that would be the effect, because it was from the date of the production of the certificate.

Professor EDGAR asked whether the discussion which was taking place before the President gave his casting vote was legitimate. He thought it was calculated to influence the President's decision.

The PRESIDENT said he felt very disinclined to give any vote at all. Coming into effect as the resolution would so speedily—in December next—he thought the matter was too serious to be entirely dependent upon the vote of one man, and under the present circumstances he hoped the Council would allow him to decline to vote at all.

Professor DEWAR asked that the names of those voting should be recorded.

The following is the record :—

Nineteen gentlemen present, eighteen voted.

For the resolution—Professor Dewar, Mr. Simpson, Professor James M'Call, Professor M'I. M'Call, Professor Owen Williams, Mr. Carter, Mr. Fraser, Professor Edgar, and Mr. Byrne (nine).

Against the resolution—Mr. Mason, Mr. Lawson, Mr. Dollar, Professor M'Fadyean, Mr. Villar, Mr. Hartley, Mr. Trigger, Mr. Mulvey, and Mr. Barrett (nine).

Mr. Abson did not vote.

MOTION BY PROFESSOR M'I. M'CALL.

Professor M'I. M'CALL moved "That the Council of the Royal College of Veterinary Surgeons make arrangements to conduct a Special Preliminary Educational Examination for Veterinary Students."

He said it was most unfortunate that the last vote taken was not decisive, because it had a certain amount of bearing on his motion. Had Professor Dewar's motion been negatived, he considered that the only reparation the Council could have made in order to be fair and honest between school and school would have been to vote for the motion he was bringing forward. In order to justify his action in bringing forward his motion he wished to consider the question under three heads.

(1.) That the Royal College be asked to conduct an examination for itself.

Why? Because at the present time there was a disparity in the Preliminary Examinations as held in Scotland and as held in England.

(2.) That the Royal College appoint examiners to conduct the examination.

Why? His idea was that if the College appointed examiners of their own the same men would examine the papers from all the various institutes, and in that way would arrive at a righteous judgment.

(3.) That the proposed Preliminary Examination conform to bye-law 52.

That closed the door to any member of the profession or Council saying that they wished to lower the standard of examination. How was that scheme to be worked out in order to prevent the Royal College of Veterinary Surgeons losing money in connection with it? Professor Williams had very kindly given him some very useful information, which he thought would enable a workable scheme to be made out. The first thing necessary was to appoint four examiners; one man to examine in modern languages, one in English, including geography, history, &c., one man in mathematics (Algebra and Euclid), and the fourth man to examine the papers set on the dead languages. These men would receive as fees three guineas for each paper which they set, plus 1s. or 1s. 6d. for every student's paper they corrected. Each examination would thus cost the College £12:12s., plus 1s. or 1s. 6d. for each paper examined. He suggested that the examinations should be held in Glasgow and Edinburgh, London and Dublin. The Council would require to appoint a delegate to watch the students while the examination, which lasted two days, was in progress. These delegates usually cost one guinea a day, and consequently at each examination held there would be a cost of eight guineas for the attendance of delegates. The examinations would be held twice a year, in September and March, upon the same day and at the same hour, and the same paper set at all the various institutes. That would do away with the continual cry of disparity between the examinations. The appointment of examiners would be conducted in the following way. Each College would nominate one examiner; the London College would nominate an examiner in one of the four subjects mentioned, and Glasgow and Edinburgh would each have the nomination of one man. He estimated that the total cost of the examinations per annum would he £50. If the students paid a preliminary fee of one guinea each, surely at the five Colleges they would be able to produce more than fifty students a year! If that were done the Royal College would have a financial profit, and at the same time maintain the standard fixed in its own bye-laws.

Professor Williams, in seconding the resolution, said it would not be a difficult matter for the Council to obtain the services of four eminent scholars to conduct the Preliminary Examination for the fees mentioned on such a standard as the Council were pleased to dictate to them. The Council could say to the examiners,—"The standard this year is to be on the second-class first division of the College of Preceptors." Next year, if the Council thought there might be an advance, it would say,—"It is to be on the standard of the first-class College of Preceptors," and so on, without having to follow exactly the alterations in the examination of medical students.

Professor M'Fadyean said he never heard a more extraordinary proposal than the one he had just listened to, and he wished to point out the

extraordinary inconsistency of some of the gentlemen who had been speaking. In Committee those gentlemen had expressed themselves in favour of directing the Board to conform to the standard of the examination necessary to get a second-class College of Preceptors certificate; at any-rate there was no doubt Professor Williams had said that would be the direction given to the newly constituted Board. But it was only a few minutes since those gentlemen had recorded their vote in favour of the resolution which would have rejected the examination necessary to obtain a second-class certificate, and have imposed an examination considerably higher. He thought Professor M'Call owed it to that Council to explain such extraordinary inconsistency. Why at 5·30 did they want the examination more difficult, and at 6 o'clock less difficult?

Professor WILLIAMS said he was being misrepresented. What he said was, it was the option of the Council to say at what standard it was to be fixed.

Professor M'FADYEAN contended that that still left an inconsistency to be explained, that last night certain gentlemen voted in favour of Professor Dewar's motion, and to-day were in favour of setting up a new examination standard of an existing examination which they declared to be too low. As a teacher he repudiated any desire to have a hand in constituting a Board to examine in general education; he objected to it. In the discussion on the previous motion, Mr. Barrett made use of language which almost suggested there was room for suspicion that the branch examination conducted by the College of Preceptors at the Royal Veterinary College was probably in need of better supervision. He took that opportunity of stating that the branch examination to which Mr. Barrett referred was absolutely under the supervision of the College of Preceptors. He had never been in the room when it was held, and knew nothing whatever about it, and he distinctly affirmed that if there was any laxity in the supervision it was a matter chargeable solely to the body conducting the examination. Mr. Barrett might as well have suggested that the examination for the Junior Certificate of the Oxford and Cambridge was in need of proper supervision. It was possible the remark was true of any examination. But stated in the connection in which it was, it would have led one to suppose that the authorities at the Royal Veterinary College had some control over the examination. (No, no.) At any rate there was no doubt the motion under discussion sought to give the schools a measure of control over the examination. He thought it argued a decree of courage that almost amounted to hardihood, to find a teacher making any such proposal at that Council. The Council would never allow the schools to control the examination in general education.

Professor M'CALL (interrupting) said the argument was that the schools should nominate the men who were likely to be appointed.

Professor M'FADYEAN contended that the schools ought not to nominate gentlemen for anything, and as a teacher he repudiated any desire to possess any such power. He did not see in the least the necessity for passing the proposed new bye-law, except as a satisfaction to the Scotch schools, if they took up the position that it would reduce their dignity to accept a branch examination from the College of Preceptors. He understood Professor Dewar rather retired from that position now, and did not care very much whether they were English, Scotch, or Irish. If they intended to have the examination on the grade of the second class College

of Preceptors, why on earth did not they have that examination itself? That was what he could not understand. He quite understood the desire on the part of some of those connected with the schools to have the examinations as it were a little bit easier than the existing examination for the second-class certificate, but of course it would be fatal to the demand to admit that there was any hope of that sort. Their desire was to have the examination on absolutely the same grade as the existing examination. He was absolutely opposed to the raising of the standard, and he was equally opposed to the lowering of it. At the present moment they ought to keep to the existing standard. It was an absolute misrepresentation of the circumstances to represent that there was any examination open to students in England which was not open to students in Scotland. There was no need to institute a new examination, and he thought some very much stronger reason than any which had been adduced would have to be brought forward before the Council agreed to set up a new examination of its own.

Mr. BARRETT was unable to support the motion. With regard to what he said concerning the examinations at Camden Town, he did not suggest that Professor M'Fadyean was in the room, or had anything to do with the examinations, but he had been told there was a certain laxity there, for which of course the College of Preceptors was entirely responsible. With regard to Professor M'Call's scheme, he was opposed to examinations being held at the schools at all, and also to the schools nominating examiners. The difficulty would be escaped if the Educational Institute of Scotland was prepared to institute an examination similar to that which prevailed on the 30th June 1896.

Mr. VILLAR said that he came to the Council strongly inclined to support Professor M'Call's motion, but he suggested that the schools should appoint examiners, and this would give rise to fresh dissensions, therefore he could not support the motion.

Professor M'I. M'CALL explained that his suggestions were simply put forward as a possible scheme for the solution of the difficulty. If the motion was passed it would be for the Council to arrange whatever scheme they chose. Professor M'Fadyean had asked why a higher examination was suggested at one time and a lower one at another. The explanation was easy. He wanted an equitable examination, and it did not matter whether it was high or low, as long as it was not lower than the standard of the register. Scotchmen were sitting under an examination which was higher, and if Scotchmen did so, why should not English students do the same? He contended that if equality could not be got in one way under Professor Dewar's motion, another scheme should be brought forward, which he had endeavoured to do in his motion, which would give equality, and which at the same time would be in accordance with the bye-laws.

Professor JAMES M'CALL asked if the Council was prepared to accept a certificate from the Educational Institute of Scotland running upon the same lines as entitled the holder to be registered as a medical student in June 1896.

Mr. MULVEY said they had no power to refuse it.

The PRESIDENT thought the difficulty was that the Educational Institute refused to give the certificate.

Professor JAMES M'CALL replied that the Institute would give the certificate if the Council would accept it. If the College would accept a

certificate upon the same conditions which existed on the 30th June 1896, that was a way out of the difficulty.

Professor EDGAR thought the suggestion would put the Institute into a most awkward position. They no longer possessed such an examination.

Mr. SIMPSON said he understood Professor Dewar to say that the Institute of Scotland would not give that certificate now, and would not hold the examination.

Professor JAMES M'CALL replied that the Institute would hold the examination, and would grant the certificate if the College would accept it.

Mr. THATCHER (Solicitor) said the difficulty was that the words in the schedule were "Educational Institute of Scotland Preliminary Medical Examination," so that the College was fixed to the medical examination.

Professor M'FADYEAN thought the Council might give effect to it by asking the Educational Institute of Scotland to conduct the examination on the former lines, and there would be nothing unfair in that. Whilst he had stated the objections to the proposal, in London they had no objections to an examination conducted by Scotchmen, and if the Council would arrange with the Educational Institute to hold an examination on any grade whatever, and hold it in London every time they held it in Edinburgh or Glasgow, they would accept it as a solution of the difficulty.

Professor DEWAR said he should support Professor M'Call's motion in order to show the intensity with which he felt they were being unjustly treated in Scotland in the matter of the Preliminary Examination.

Mr. SIMPSON asked the Solicitor for his ruling whether, in the event of the Institute of Scotland holding an examination for Veterinary students on the grade that was adopted on the 30th June 1896, their bye-laws would enable them to accept it.

Mr. THATCHER replied in the negative, as it would not be the Preliminary Medical Examination now in force.

The resolution was then put and lost—5 voting for and 7 against the motion.

NOTICES OF MOTION.

Professor DEWAR gave notice of the following motion:—"That the words 'on June 30th, 1896,' at the end of bye-law 52 be deleted."

Professor M'I. M'CALL gave notice that he would bring forward a similar resolution to the one he had moved on the present occasion at the next meeting.

VOTE OF THANKS TO THE PRESIDENT.

On the motion of Mr. MULVEY, seconded by Professor JAMES M'CALL, a hearty vote of thanks was accorded to the President for his conduct in the Chair, and the meeting terminated.

Royal Veterinary College of Ireland.

On Wednesday, October 3d, the first session of the Royal Veterinary College of Ireland was inaugurated in the Lecture Theatre, Leinster House. The inaugural address was delivered by the Principal, Professor Mettam, B.Sc., M.R.C.V.S.

Sir Christopher Nixon, President of the College, presided, and there was a very large attendance of veterinary surgeons and others interested in the institution.

Among those present were—Jacob Mark, M.R.C.V.S.; Chrs. J. Carrick, M.R.C.V.S.; James Purdy, M.R.C.V.S.; P. W. Cooper, M.R.C.V.S.; W. Chambers, M.R.C.V.S.; James Mark, M.R.C.V.S.; Arthur J. Dobbyn, M.R.C.V.S.; Matthew Murphy, M.R.C.V.S.; S. W. Haffield, M.R.C.V.S.; James Watson, M.R.C.V.S.; J. B. Dunlop, M.R.C.V.S.; T. Herbert Carr, M.R.C.V.S.; W. H. Wilkinson, M.R.C.V.S.; Charles Steel, F.R.C.V.S.; C. J. Clifford, M.R.C.V.S.; J. F. O'Leary, student, N.V.C., Edinburgh; Wm. Pallin, F.R.C.V.S., J.P.; John Barry, M.R.C.V.S., J.P.; Veterinary-Major Short, A.V.D.; Geo. T. Dunne, M.R.C.V.S.; George Newsom, M.R.C.V.S.; A. J. Beckett, M.R.C.V.S.; V. Doris, M.R.C.V.S.; Henry G. Allen, L.R.C.V.S.; F. C. Mason, M.R.C.V.S.; James A. Bole, M.R.C.V.S.; T. D. Lambert, F.R.C.V.S; John J. Kelly, M.R.C.V.S.; F. F. Collins, F.R.C.V.S.

The Chairman said this was a meeting which he might describe as historic, inasmuch as it was to inaugurate the first session of the Royal Veterinary College of Ireland. After many vicissitudes they had at last reached the long-sought-for goal, and to-day it commenced its career, which he hoped would be fruitful in usefulness to the veterinary profession, agriculturists, &c. As a physician, he might say that he had always taken the keenest interest in the establishment of veterinary medicine in Dublin. It had the closest possible relation to human medicine. He believed that the establishment of this College would react most favourably on human medicine, and the two great schools, working together, would help to develop research, to clear up important problems, both in the relation of preventive and curative medicine. In both they had a science which was making enormous strides. The College was a school not only for the education of veterinary students, but one which would result in the establishing of a high order of research, and by its research, especially in relation to human medicine, they would probably have problems cleared up which would have the greatest effect on the national progress of the country. They had at present three distinguished men devoting themselves to the study of bacteriology—Professor M'Weeney, Professor O'Sullivan, and their own Principal—and he did not think it was too much to expect that some very notable work in the direction of research would be accomplished by these brilliant men. However, research work, to be fruitful of good, should be well supported, and those who followed it should have reasonable emoluments for their labours, and for that they must look to the Department under which the College had been placed, and, from his experience of that Department, contrary to his experience of other Government Departments, they had shown a readiness to facilitate their wants and a generosity to meet that augured well for the future. He freely acknowledged the sympathy and generous spirit with which the Department was dealing with the wants of the College. In introducing the Principal he (speaker) said

Professor Mettam was a distinguished graduate of Edinburgh University and editor of the "Veterinarian."—(Cheers.)

Professor METTAM then proceeded to deliver his inaugural address, in which he gave a brief résumé of the history of the profession since its origin in 1791, and then said—"When one ponders for a moment and considers the intimate relation that must exist between the owners, breeders, and raisers of stock, and the practitioner who studies them in health and disease, and, further, when we take into account the intimate relation between the condition of agriculture generally and the wealth of the country, it seems more than passing strange that the British Government has never until now given its support to the veterinary profession. For years past the veterinary student or practitioner has been compelled to seek his knowledge in schools that have depended upon the fees of the students, or upon the money earned in practice for their upkeep and support. Research work done in the Colleges has been done at the personal expense of the worker, and this is no slight item considering the wholly inadequate remuneration offered for the work required. Can one wonder any longer why the best men are lost to science, and why the practitioner's life is chosen? and so need we be astonished to learn that though the British practitioner can more than hold his own as a practical man with his Continental colleague, yet the amount of new work, the results coming from the Colleges following research, is small indeed. Veterinary science has been crippled in the past from sheer lack of funds—the wherewithal to recompense the labourers who were not wanting, but ready and indeed anxious to begin. May we hope that a new era has dawned, and that the true relation of the veterinarian to the live stock of the country has at length been recognised! On the Continent the connection between the State and the education of the veterinarian has, from the pecuniary point of view, been more satisfactory. The State for a nominal sum educates the student, and makes an annual grant for the maintenance and support of the student, teacher, and college. In the French schools and the Belgian school the students live inside the walls of the College on the old University residential system; and in France, where there are three schools—at Alfort near Paris, Lyons, and Toulouse—an annual grant is made of 700,000 fr., equal to £28,000; of this I believe Alfort absorbs about half. The school at Brussels enjoys an annual subsidy of about 179,000 fr. In Berlin, according to the *Landwirthschaftliche Jahrbücher* for 1896, the amount expended during the financial year 1895-96 amounted to 237,881 marks; and for the school at Hanover during the same year, and not including the cost of the new buildings—for the new school was then building—the sum was 106,812 marks. The new school in Hanover, which is a model of what a veterinary school should be, cost 2,250,000 marks, and was building four years. In Belgium a new school is being built upon the outskirts of Brussels, some distance from the present school. The site is 3½ hectares in extent (about 8¾ acres), and the cost is estimated at 2,000,000 fr. or thereabouts. To show the magnitude of the veterinary schools and the lavish hand with which the Government deals out money in support of its veterinary schools, I may mention that in Berlin a new anatomical department is about to be built—Professor Schmaltz kindly gave me copies of the plans—and this alone will cost 500,000 marks. In Copenhagen the veterinary and agricultural schools are amalgamated, and upon the agricultural side everything that bears upon management of estates and tilling

of the soil, forestry, surveying, &c. is taught; the veterinary side accounts for the preparation of students for the profession. In addition, we must not forget that most important institute which acts as a linkage, if such were necessary, between agriculture and veterinary science—the Bacteriological Institute, with that most genial of savants Professor Bang as the Director. Here is prepared in abundance the tuberculin which is expected to weed out of Danish herds the tuberculous animals, and in a few years' time to procure for the cattle of Denmark a freedom from tuberculosis. In Denmark, to my mind, the true position of the veterinarian and agriculturist is found, and the interdependence of the two demonstrated. The cost to the State of the combined school is 192,400 kröner (£10,822 : 10s.) for last year. It will thus be seen the State fosters veterinary education, and recognises the vast importance of advanced veterinary knowledge and its relation to a valuable asset in the national wealth—the live stock of the country.

The Lecturer then explained what was necessary for a veterinary school to flourish. In the Royal Veterinary College of Ireland they intended to strengthen their clinical side, and growing strong, to strengthen it more, to make it a special feature of their teaching, that students might see all that was reasonably possible to see and understand during their course, and where they hoped those who were already members of the Royal College would come to examine and study cases. And they hoped, by the assistance of the existing practitioners in Dublin and throughout the country, to have an abundance of clinical matter which would be available for study. The veterinary surgeons of Dublin recognised the value of the clinique, and in this question of clinique they were willing to assist them so far as it lay in their power. They desired to establish a free clinique which would be open to all who were unable to pay for professional assistance, and that in order to obtain the benefit of the help they were willing to give, those desiring their advice were merely required to obtain a card or note from any veterinary surgeon or well-known gentleman in the city or outside its boundaries, certifying that the owner of the patient was unable to pay. They wished to obtain not only horses, but cattle, sheep, pigs, dogs, and poultry—indeed, all the lower animals that were in need of care or assistance—that their studies might be truly veterinary, and not limited to merely one species. He did not forget that the breeding of horses was of vast importance to Ireland, and that the equine population formed a large portion of the national wealth, and they should do all they could for the horse. There were other animals equally a source of wealth to the nation, and especially valuable as food, and they would not be overlooked. He expressed their high appreciation of the sympathy and assistance rendered them by that old and well-tried friend of science, art, and industry, the noble Royal Dublin Society, a Society that needed no commendation from him to them, for its reputation was world-wide, and its sympathies minutable; but he could well understand how the *alma mater* of much that was valuable and cherished within Dublin should rejoice to see the consummation of a long-cherished desire—the foundation of a Veterinary College within the city. The Department of Agriculture and Technical Education would doubtless emulate the good example shown it by the Society, and continue to take a benevolent interest in the College which had come into being with its own creation, and the science taught therein, for they hoped to be an instrument of much good in aiding and abetting the work undertaken for the protection of live stock in Ireland.

Mr. WILLIAM FIELD, M.P., proposed that a hearty vote of thanks be passed to the lecturer for his able address. He supposed the reason he had been called upon to propose the motion was because he was President of the Cattle Traders' and Stock Owners' Association, which had been the first body in Ireland that brought under the notice of the public the great necessity that existed for a Veterinary College. He dwelt at length upon the want which existed for such a College. The Vice-President of the Board of Agriculture was most sympathetic towards everything they had put before him about the College. He was glad to be in a position to state that Pembroke had withdrawn its opposition to the founding of the College.

The resolution was passed unanimously amid applause.

Mr. HORACE PLUNKETT, Vice-President of the Board of Agriculture and Technical Instruction, who was received with loud applause, said he had watched the growth of the Institution from its first conception in the mind of Mr. Field until that day, and while the idea of the College was received with varying favour, and while many interests had to be consulted and conciliated, he thought they all would agree that no institution of such vast importance had ever become a practical reality with such little friction and bright prospects of success. He had some experience of the causes which had led up to this happy result. He found himself, when he became a subordinate member of the Government, charged with a great responsibility towards the Royal Veterinary College. He was given £15,000 which he had to hand over to the College on such conditions as he might wish to dictate. He had no views on the point, and instead of appearing to make suggestions, he preferred to bring himself into touch with the best thought and highest knowledge of science in the country, to bring all interests together, and to rather assist their work than to do any great work of his own. On this occasion he supposed no Minister ever found so much willing and efficient help ready at his hand. He had discharged his responsibilities so far without the slightest difficulty, and, he thought, without having incurred the displeasure of any particular interest. Of course he had found, as he expected to find, that the profession had very strong views as to what ought to be done and what ought not to be done, but they were good enough to send deputations to him, and allowed him to put his name before them, and as far as he could gather, an arrangement had been come to by which the interests of their profession were adequately safeguarded. The future responsibility of the Department should consist, he thought, in recommending the Board, which absolutely controlled the Department's expenditure in these matters, to make grants to the Royal College to enable them to carry on their work, and he thought the Department and the Board might be trusted to furnish any funds that were required to do what was properly the work of the Department in these matters. The Department had important functions towards the live stock industry of Ireland, and it would be its duty to ascertain what the requirements of that great national interest were, and, so far as those required the assistance of that Institution, the Department would have to supply the funds to enable the Institution to do the work. Of course the funds of the Department were very inadequate for the demands which would be made upon them, and both the Department and the Boards that controlled the expenditure would have to divide those funds over the large number of interests which came within the sphere of

their work as thoughtfully as they could. But he thought he could assure the Royal Veterinary College that, if they lived up to the high ideal which Professor Mettam had put before them, they would have a very strong claim on the assistance of the new Department.

He desired also to thank the Royal Dublin Society for the leading part they had taken in bringing about the happy consummation of this great national project. The spirit in which they met the Department was a spirit of friendliness and generosity, and they had given on every occasion to the Department all the assistance that was asked of them. As to Professor Mettam's lecture, he had succeeded in ennobling the work of a profession whose function and mission had been, perhaps, very much misunderstood and underrated hitherto. He (Mr. Plunkett) believed that when the programme of usefulness in its economic side was undertaken by the Veterinary College, not only the breeding but the care of these other kinds of live stock which formed so much a part of their national wealth would come far more under the ken and treatment of the veterinary profession than ever they had before. Problems were coming in almost daily to the new Department in which veterinary knowledge was required, and Professor Carroll would bear him out in this, that they have already solved many which should have been solved many years ago if the people had seen the necessity of calling in veterinary science to their aid. The lecturer had shown a great grasp of the educational problem with which he was dealing. He realised that all educational problems were more or less correlated with each other; and nothing interested him (Mr. Plunkett) more in the address than the way the lecturer realised that the education in this College must be co-ordinate with the other educational systems of the country. They all agreed that the provision that would be made for bacteriological research would perhaps be as important as any of the other functions of the College, because it was in this matter that they in Ireland thought that they could produce men who could throw out some light to the rest of the world on that comparatively new and enormously important science. As to pathology, he was sure they all sympathised with the suggestion that the medical profession might be given facilities to try experiments with domestic animals which they might otherwise try on their patients, and he believed that the veterinary profession would work in the medical profession to the great advantage of both. In conclusion, he wished the Institution a great and prosperous career, and to assure them that, if he could do anything to aid the Institution, he should be always at their service.

The New Veterinary College, Edinburgh.

THE Winter Session of the New Veterinary College was opened on Wednesday, 3rd October, with an Inaugural Address by Professor Shennan, who took as his subject "Diseases Transmissible from Animals to Man, with Special Reference to the Bubonic Plague."

Bailie Hay occupied the Chair, and there was a large attendance of students, veterinary surgeons, and agriculturists.

Amongst others were:—Captain R. Steuart; Messrs. J. Borthwick, M.R.C.V.S.; G. Elphick, M.R.C.V.S.; R. Rutherford, F.R.C.V.S.; J. Clark, F.R.C.V.S.; R. J. Hickes, F.R.C.V.S.; J. Armstrong, F.R.C.V.S.;

J. Hutton, F.R.C.V.S.; A. Spreull, F.R.C.V.S.; J. Cameron, M.R.C.V.S.; P. Moir, M.R.C.V.S.; J. M'Phail, M.R.C.V.S.; J. Riddoch, M.R.C.V.S.; D. M'Arthur, M.R.C.V.S.; A. W. Lawson, M.R.C.V.S.; A. Reid. M.R.C.V.S.; A. Pottie, M.R.C.V.S.; J. Aitken, Jr., M.R.C.V.S., Dalkeith; J. Aitken, M.R.C.V.S., Edinburgh; J. Storie, M.R.C.V.S.; J. R. Baillie, M.R.C.V.S.; G. Craik, M.R.C.V.S.; A. F. Durkie, M.R.C.V.S.; W. D. Bannatyne, M.R.C.V.S.; Hume, M.R.C.V.S.; R. Connochie, M.R.C.V.S.; D. Hinge, A.V.D.; J. Aitken, M.R.C.V.S., Dalkeith; J. M'Hutchen Dobbie; T. M. Horsburgh, S.S.C.; J. Fullarton; D. Young, N.B.A.; Major Wilson; P. Durie, Edinburgh; Dr. Mackenzie, Medical Officer of Health, Leith.

Dr. SHENNAN then said—The proposition that certain diseases are transmissible from animals to man has advanced from the region of theory to that of certainty, and has become a factor of great importance, demanding the consideration of the medical profession in their endeavour to prevent and limit infectious diseases.

One disease after another has had from time to time to be added to this category, so that the list is now of considerable length, too long, in fact, to be dealt with fully by me in the time at my disposal.

It will be of advantage to us, particularly in an audience of veterinarians, present and prospective, to spend some time in reviewing our knowledge of some of the more important of them.

The first disease of this class which suggests itself to all is, of course, *Tuberculosis*.

For our purpose we may divide all animals into two classes—firstly, the domesticated, those which live to a great extent under cover; and secondly, those which live chiefly or altogether in the open air.

The former class embraces man, who lives in houses; stall-fed cattle, pigs, birds, and other animals in a state of captivity.

The latter includes cattle kept in the open—sheep, dogs, goats, horses, the carnivora and other wild animals.

The former class may roughly be said to be susceptible to tuberculosis, the latter immune or insusceptible, and the determining factor appears to be the scanty or plentiful supply of fresh air and sunshine.

Man, if placed under unhealthy conditions of nutrition and environment, particularly if he, in addition, inherit a weak condition of body, becomes susceptible to infection, and this infection occurs either from another case of tuberculosis, when the infective poison—the tubercle bacillus—usually enters the body by the air-passages and produces primarily disease of the respiratory apparatus; or—and this especially concerns us to-day—he may become infected by way of the alimentary tract by eating or drinking infected material.

The chief food substances of this nature are firstly, milk which has been infected from a case of pulmonary tuberculosis, or which has been taken from a tuberculous cow; and secondly, the flesh of tuberculous animals.

Ten to twenty per cent. of all cows are tuberculous; in fact, in some herds a much greater percentage, even up to seventy and eighty per cent., has been reported.

A tuberculous cow will only give tuberculous milk when its udder is diseased, and milk from cows in which the disease has not advanced so far may be consumed without bad effects, but the danger is that it is extremely

difficult to tell precisely when the udder is attacked. When this has taken place the milk becomes actively virulent.

It is easier to define the limits of safety so far as the flesh or muscular tissue of such animals is concerned.

Muscular tissue is rarely affected by tuberculosis, and then only in very advanced cases of the disease. There are two possible explanations of this fact: firstly, the acidity of the muscle, a condition in which the bacilli cannot develop; and secondly, the rapid passage of ærated blood through the muscle, whereby it gets a greater supply of oxygen than most other tissues. Now the tubercle bacillus has some peculiarities. When it enters the body it likes to get far away from ærated blood and motion into a dark, quiet, motionless corner, where in suitable surroundings it can develop. Again, it appears to require coadjutors, more active than itself, to produce the destructive lesions usually associated with it- It is now considered that of itself it tends rather to produce a local lesion which soon becomes quiescent and encapsuled by fibrous tissue; but that if it be accompanied by other bacteria, such as the tetracoccus or, as has been lately stated, a streptococcus, these help it to destroy the tissue widely and kill the patient. Indeed the suggestion has been made that benefit might be obtained by the use of anti-streptococcus serum in the treatment of consumption.

Meat is usually infected after death, during the process of cutting up the carcase. While doing this, the butcher has to remove or cut through diseased lymphatic glands, and the knife carries with it virulent broken-down material from these glands, and smears it over the cut surface of the flesh.

It is easy therefore by boiling, or better by roasting such meat, to destroy the organisms on its surface.

In Germany they make use of this knowledge, and meat from a tuberculous cow is boiled, under inspection, and sold at a cheap price as a perfectly safe and wholesome food. In this country we take no risks, but condemn the whole carcase.

Of the two, therefore, milk is by far the more important. Milk forms, or ought to form, the staple food of children up to the age of seven or eight years, and it is at this period of life rather than in the adult that infection by milk occurs. In most cases of "Ingestion" tuberculosis, as it is called, the bacillus attacks the intestine and spreads thence throughout the body; but it may, as it has been proved to do in the pig, enter through the tonsil, spread down the cervical glands to the chest, and cause disease of the lungs. Conditions resembling *Perlsucht* in cattle, where the pleura is affected primarily by this channel, are seldom met with in man.

It has long been taught that abdominal or ingestion tuberculosis is more common in children than respiratory tuberculosis. Examination of the post-mortem records at the Royal Hospital for Sick Children negatives this, and shows that between two and three times as many children have died of the respiratory form as of ingestion tuberculosis. This is of interest as proving that in children, as in adults, the great danger is from respiratory tuberculosis.

I may state that Dr. George Still, of London, has independently come to the same conclusions.

Can we prevent "milk tuberculosis"? Safety lies in boiling all milk before using. Now in this country we have a prejudice against boiled milk, and when one takes day after day the over-cooked milk which is the

rule in some parts of Germany, one does not wonder at it. But it is not necessary to boil away all the flavour of the milk. The tubercle bacillus cannot long resist a temperature of 75° C. So that merely raising the milk to boiling point, which is 100° C., and allowing it to cool, is sufficient in most cases to render it perfectly safe.

All people will not take this trouble, so that in some countries and districts attempts are being made to weed out tuberculous cows by means of the "Tuberculin" test. In Denmark, which depends so much on its dairy farming, this test is rigorously enforced.

Tuberculosis naturally suggests another disease of the respiratory apparatus—*Diphtheria.*

While most cases of diphtheria have been infected directly from a previous case, or by infected clothing, in many cases infection is conveyed by means of milk. In certain of these the milk has been exposed to contamination from pre-existent disease in man, but most of the cases of "milk diphtheria," according to Mr. W. H. Power and Dr. Klein, are derived from the cow herself. In an epidemic in North London, Mr. Power traced the source of infection to a "cowhouse in which one or more cows, notably those which had recently calved, had suffered from an ailment which was infective from one cow to another, associated with a rise of temperature and an eruption on the udder and teats. This eruption usually began in the form of vesicles which rapidly passed into pustules and scabs or crusted ulcers."

It was next found by Klein that a similar disease could be produced in the cow by inoculating it with cultures of the diphtheria bacillus. The discharge from the pustules so produced and the milk of the cow contained numerous diphtheria bacilli. These statements have not, so far as I know, been verified by other workers, so I give them with all reservation.

We must also recognise in the domestic cat a conveyer of diphtheria, and this case is altogether free from doubt. Many cases are reported in which human diphtheria has been derived from cats, and, conversely, it is undoubted that cats can contract diphtheria from man. Dr. Bruce Low, in a report for the Local Government Board on an epidemic at Enfield, explained its causation in this way.

Scarlet Fever.—Here again for the source of infection we must occasionally look elsewhere than to an antecedent case in man.

Dr. Klein, in investigating the Marylebone outbreak in 1883, found that milk supplied to the families in which the disease occurred was derived from certain cows which were suffering from a peculiar disease, which he considered the analogue of human scarlatina.

Thomas has also stated that a disease corresponding to human scarlet fever has been met with in horses, dogs, cats, swine, and other domesticated animals. Dr. Caiger, in his article in "Allbutt's System of Medicine," states that he is convinced that cats at any rate, rarely, if ever, actively convey the contagion of scarlet fever. Against this opinion we may quote another nearer home. Principal Williams, who is well-known to be an accurate observer, tells me that he was once called in to attend two favourite cats in a household in which several of the family were suffering from scarlet fever. The symptomatology of the disease in the cats seemed to be analogous to that of scarlet fever in man, and he has no doubt that these animals suffered from scarlet fever. Of course, if they can suffer from scarlet fever they can also transmit it to man, but we require more proof.

Glanders and Farcy.—While farcy is seldom a primary disease in the horse, it appears to be the usual form which attacks man, that is, an acute rather than a chronic specific blood-poisoning.

Infection takes place very readily, *e.g.*, by inoculation of a cut or an abraded surface with the discharge from a diseased animal, or during dissection of, or operation on, such an animal.

It is important to note, however, that infection may take place without the presence of broken skin. If bacilli are mixed with lanoline and rubbed into the skin, infection takes place. They are supposed to make their way into the hair follicles, develop there, and gradually pass into the deeper layers of the skin and even to the lymph and blood-streams.

Acute farcy is almost uniformly fatal in man.

Anthrax.—Anthrax, or splenic fever, was the first infectious disease whose causation and bacteriology were thoroughly worked out.

Davaine, as far back as 1850, described a rod-shaped organism in the blood of infected animals, and Koch was able to isolate it, grow it, and reproduce the disease by inoculation.

In 1846 it was first noticed that workmen who had to sort hides or fleeces, or who had to work in manure heaps from districts or countries in which splenic fever existed, were apt to develop a pustular skin disease, which often proved fatal. Rod-shaped organisms had been found in the pustules, and after Koch had clearly identified the character of the anthrax bacillus, these rod-shaped organisms were found to possess identical characters, so that the diseases in man and in the lower animals were the same, though manifesting themselves in different ways; the disease in some of the lower animals being a septicæmia or general blood-poisoning, the organisms growing in the blood, whereas in man they form the localised "malignant pustule," in which they manufacture a chemical poison or "toxin," and send it into the blood-stream. Treatment in man depends on this peculiarity, excision of the pustule at an early stage curing the disease.

Plague.—This disease has long been recognised. It is also known as the "Black Death," and the most terrible visitation this country has experienced of it was in 1665. The recent epidemics began in Hong Kong in 1894, when Kitasato and Yersin discovered the causative organism independently.

In Bombay, during the epidemics which have prevailed since 1896, nearly 80 per cent. of deaths have occurred.

Plague is a virulently infective disease, which is characterised by certain signs and symptoms. The chief of these is acute inflammation of the lymphatic glands near the site of infection, which become enlarged and very tender. The inflammation also spreads to surrounding parts. If other pus-forming organisms be present, the glands break down, and cause blood-poisoning. Similar conditions are found in the rat.

Any enlarged, acutely inflamed gland is called a "bubo," whence the name Bubonic Plague.

The disease occurs in India chiefly during the cold season, lessening greatly towards the summer. This, as Surgeon-Captain Davidson, of the Indian Medical Service, tells me, is explained by the habits of the lower classes of the people. During the warm season they sleep outside their dwellings, under comparatively healthy sanitary conditions, whereas during the winter they crowd into their houses, in which sanitation is unknown,

and lie packed together on the mud floor. Need it be wondered that the plague readily passes from one to another?

There are three endemic centres, from which it makes periodic excursions over the face of the earth. The chief is Thibet, the others are Arabia and Central Africa near to Uganda. There are two varieties; the so-called Levantine, which does not tend to spread, and the Chinese, which is active and tends to spread.

The importance of this disease to us to-day lies in the fact that the bacillus can infect animals, such as mice, guinea-pigs, rabbits, and particularly grey monkeys and rats. In Formosa the name given to plague signifies a "disease of rats." In monkeys a prick with a pin dipped in a culture is sufficient to cause the disease, and this partly explains the ease with which man is attacked.

Neither rats nor man are infected by the alimentary canal; they are infected by the skin, or in a minority of cases by inhalation of the organisms, which cause an acute pneumonia.

In man inoculation of the minutest scratch or cut with the contagion is sufficient, but in very many, probably the most of cases—according to Simond, who carried out these extremely hazardous experiments—the carrier of infection is found in the flea. He found the bacillus of plague in the alimentary canal of large grey fleas which infested diseased rats, and tells us that such fleas when placed on dogs or man attacked them immediately. The diseased rat possesses the bacilli in its blood or tissue juices; in these it passes to the flea, and then to man, attacking, as it is to be expected, chiefly the lower extremities.

It reminds us of the old quatrain—

> "And great fleas (animal pests) have little fleas
> Upon their backs to bite 'em,
> And little fleas have lesser fleas (bacteria),
> And so *ad infinitum*."

The disease attacks those who live in poor circumstances and in defective sanitary surroundings; and from the Glasgow cases we have learned the disturbing fact that, all other circumstances being favourable, it may attack the white man as readily as the native of India.

In these cases, needless to say, it is unnecessary to call in the aid of rats as agents in the conveyance of infection; once begun by direct contact, there were plenty of the secondary agents, if I may call them so, to convey the disease from one person to another, and to contaminate the houses as well, justifying the rigorous preventive measures adopted by the Glasgow sanitary and cleansing departments.

Foot-and-Mouth-Disease.—This is a disease in which a vesicular eruption appears on the mucous membrane of the mouth and on the skin of the digits. It is very contagious amongst ruminant animals, both wild and domestic, and among pigs.

It is frequently transmitted to man—the contagion travelling in the saliva of animals, and the discharge from the ulcers.

There are numerous instances of this reported. The disease occurs in man on the hands or in the mouth, and is caused by direct infection with the discharge, or from drinking the milk of diseased animals. It may retain its virulence in butter made from such milk.

Lastly, and shortly, I shall touch on *Rabies* or *Hydrophobia*. Man, along with all other warm-blooded animals, is susceptible to this disease.

Though the poison appears to collect specially in the spinal cord, the infective agent, whatever it is, seems to be present in the saliva. It cannot be wholly a chemical poison, because there is a regular incubation stage during which the poison develops in the body before symptoms of the disease manifest themselves. However, as rabies is now non-existent in Great Britain, I need not enlarge upon it.

Referring finally to the work before the students in the coming winter, and the outlook for the profession generally, the Professor said that one result of the South African War would be a great increase in the number of mounted men in the British Army, and a corresponding increase in the number of veterinary surgeons to have charge of the remounts. Since the qualifying course had been lengthened to four years there had been a great falling off in the number of students entering the Colleges, and there was now a great scarcity of qualified men. An increase in the number of students might now be reckoned on, but a new College, supported by the Irish Board of Agriculture, had been founded in Dublin, and would, no doubt, draw away to that centre the large number of Irish students who used to come to the Scottish or English Colleges for their veterinary training. The new College in Ireland would not affect the New College in Leith Walk so much as it would affect the other Colleges in Great Britain, as only a few students from Ireland attend that College. The New College, which had been so long presided over by Principal Williams, had a splendid record with regard to the success of its students. Of the Inter-Collegiate Examinations the most important by far were those for the Fitzwygram prizes. This last year no fewer than three of the Fitzwygram prizes had been won by students of that College, and these three prizes were not the lowest ones. On the contrary, they were the first, the second, and the fourth. The competition for the Fitzwygram prizes brought out all the best men of the year, and the winner of the first Fitzwygram prize was justly regarded as the dux of the year. This College, therefore, had not only turned out in the last year the dux of the veterinary students, but it had also turned out the second winner and also the fourth winner. He called upon the students to join hands with the teaching staff of the College in doing even better next year by carrying off not only the first, second, and fourth Fitzwygram prizes, but the first, second, third, and fourth, and he need hardly assure them that no effort on the part of the staff would be wanting to assist them in that noble ambition. (Loud applause.) A cordial vote of thanks was awarded to the Professor for his address.

Principal WILLIAMS, in moving a vote of thanks to Bailie Hay for presiding, referred at some length to the great and felt want of young qualified practitioners to act as assistants and take up practices as required. The Army and the country would require a great many more veterinary surgeons than could be got at present. One of the causes of the great decrease in the number of veterinary students in recent years was the edict of the Royal College requiring all students to pass their Preliminary Examinations at one time, and this edict had been passed, he verily believed, with the sinister design of starving out the Scottish Colleges. He held that it would be far better for the students, and all concerned, if the students were allowed to take their Preliminary Examination in two sections.

Bailie HAY having briefly acknowledged the vote of thanks, the proceedings, which were most enthusiastic throughout, then terminated.

Glasgow Veterinary College.

THE Winter Session of the Glasgow Veterinary College was opened on Friday, 19th October. There were present among others—Rev. D. Watson, of Woodside Church, *Chairman;* Dr. John Lindsay; Professor Williams; James Clerk, Coupar-Angus; Professor Knox, Glasgow; Principal M'Call; J. W. Douglas; J. Weir, V.S., Glasgow; Mr. Taylor, V.S., Rutherglen; Dr. Robb, V.S., America; Mr. Robb, V.S., Glasgow; Jno. Hill, V.S., Glasgow (Jno. Hill & Son); Mr. Allan, V.S., Clerkston; Mr. Peddie, Jun., V.S., Cathcart; Mr. H. Cameron, V.S., Glasgow; Mr. Nisbet, V.S., Galston; Mr. Brown, V.S., Holytown; and Staff.

The Introductory Lecture was delivered by JOHN LINDSAY, Esq., M.A., M.B., on "The Method of Science," as follows:—

GENTLEMEN,—Principal M'Call has done me the honour of asking me to address you at this formal opening of a new Session. I am not a member of the veterinary profession, yet, as a student of comparative anatomy and a naturalist in a modest way, the work of the College is of very special interest to me; and I feel it a pleasure as well as an honour to take part in it even to this extent.

I confess to a failing which is common to all who concern themselves with the problems of biology, the disposition to poach within the domain of the veterinary surgeon. The breeding and care of the domestic animals is a vast series of biological experiments, promising results of the greatest importance to science; and we who are without the pale look on with interest and in the hope of sharing in the spoil. We look to this quarter for the means of settling many questions now pressing for solution; in particular, questions relating to heredity. The notions involved in such terms as telegony, reversion, variation and the transmission of variations, are still awaiting accurate definition or disproof, and material to this end comes within the daily experience of the veterinary surgeon. The study of the state of domestication itself, its influence in disease and in reproduction, especially disordered reproduction leading to malformation in the offspring, must help us to a better understanding of the conditions of life in man, the most domesticated of all animals.

It is little wonder, then, that naturalists should seek to harvest in this rich field; but it is matter for surprise and for regret that the veterinary profession itself should be so neglectful, as it seems to me, of the scientific possibilities of its own work. I think I do not go beyond the limits of fair criticism when I say that veterinarians have not done so much for the advancement of science as the wealth of material at their disposal should have enabled them to do. They have given us indeed a fair number of observed facts, but they have left to others the duty and the credit of assimilating these into the general body of organised knowledge. Witness the work of Darwin on Variation; and witness the most recent incursion into the veterinary field, the famous Penicuik experiments. These experiments could never be superfluous; yet I cannot but think that data to the same purpose ought to have been, nay, indeed have been, collected by veterinarians, and ought by them to have been put into scientific form. It is of course immaterial to science who it is that adds to her store, but it is not immaterial to the profession. The practitioners of the healing art as applied to man have recognised this. They have learned that nothing has

contributed to raise the status of their profession so much as the cultivation of science by many among them. And this result has come about, not so much because knowledge commands respect for the possessors of it, as because the devotion of many to scientific pursuits has set up a standard of culture to which all have been compelled to approximate.

You will not have been long in practice before you will have forgotten most of the facts of zoology and of botany, and even most of the facts of chemistry which you learned during your college days; and I cannot say that you will be the worse by that forgetting, for the actual contribution of any one of these sciences to a good working knowledge of medicine and surgery is very inconsiderable indeed. You will then be disposed to look back on the time and labour spent on these studies as so much wasted effort, and you will doubtless think that, had you had the shaping of the curriculum, you would have ordered things far otherwise. Now, I can hardly be suspected of having an axe of my own to grind by insisting on the importance of this or that subject, yet I am bound to assert that these preliminary scientific studies are almost the most valuable part of your educational course. You may certainly forget most of the facts belonging to them, without detriment to your skill as surgeons, but if you have failed to acquire that particular habit of mind which we call the method of science, and which the study of zoology, botany, and chemistry is so eminently fitted to develop, if you have failed to acquire this, you will not be equipped as you ought to be for the work of your profession. Your success in practice must largely depend on your skill in diagnosis, and diagnosis is only a particular application of the general method of inquiry made use of in all the natural sciences. Yet, if you think to pick up a knowledge of the method directly from your work in the clinique, you will surely be disappointed. The phenomena of the living body present the greatest difficulties to scientific treatment, and our knowledge of disease is not sufficiently organised to exhibit the working of the whole method. The sciences of zoology, botany, and chemistry, however, have been so far systematised, and that by the method itself, that in them it has been crystallised as it were, and in them we can study it with tolerable ease and certainty. It is this, rather than anything we derive from them having a direct bearing on the cure of disease, that makes these subjects an indispensable part in any system of preparation for the practice of the healing art.

This consideration has another bearing, which I should like to touch upon. The growth of the medical curriculum in recent years, and the cry for still other additions, must be regarded with misgivings by all who are interested in educational affairs. Whenever any department of learning is seen to add to the resources of medical art, some one is sure to come forward to advocate the inclusion of that subject in the student's curriculum. Electricity, for instance, is becoming of ever-increasing importance as a means of diagnosis and as a therapeutic agency, so the medical student must be required to take a full course in that science, including the study of electric traction and the construction of dynamos. In time, if we are to pursue this policy, he will be asked to give proof of his acquaintance with all arts and all sciences; for in truth the art of medicine draws upon every one of them for the benefit of the sick. To meet so futile a demand, every proposed addition to the curriculum must be subjected to scrutiny on a sound principle; and the principle which most

commends itself, to me at least, is this,—It should be asked, not whether the proposed study gives to the practitioner some knowledge that may be useful to him, but whether it affords a means of training the student in the method of science better than those we already possess. If this test be rigidly applied, there will be no danger, as without it there is much danger, of the curriculum growing beyond the capacity of the average brain. Nor is it an arbitrary and unreasonable test; it merely insists on the essential distinction between education and the imparting of information.

What, then, is the method of science? It may appear to you that you learn zoology or botany as you learned geography in your school-days. You may not be aware of any other result than an increase in your stock of information; but if you have worked to any profit at all you will have learned to look at things in a definite way and with a definite purpose; to see facts in their right perspective, and to grasp them together by conceptions that are truths and not idle fancies; in short, you will have acquired a certain habit of mind; and this it is that we call the method of science. Whether you acquire the habit by conscious effort or not, acquire it you must, for it does not come by nature. It is true that to us of the present day the scientific spirit appears to be only our ordinary manner of thinking; for we have grown up in the presence of it, and we cannot refer to a time when it came upon us as something new and strange. We do not readily see that the way of science is different from our way of dealing with practical affairs; and yet it is different. Those principles which so large determine the decisions of daily life, compromise and expediency, have no place whatever in the method of science. And that the method of science is not simply intelligence in its ordinary working, but specially directed intelligence, is made clear by a glance at the history of civilisation.

When one considers the splendid work in literature and art, in philosophy, in law, and statecraft, that was accomplished in ancient and mediæval times, one is compelled to acknowledge that the human intellect was no less vigorous then than it is to-day; yet the beginning of the real advancement of natural science dates no further back than the end of the sixteenth century. It would not be an exact statement of the truth to ascribe the tardy rise of natural science to a single cause; yet the most important factor in the sum of causes was the employment of a wrong method. The keen-witted Greeks thought that they could add to knowledge by elaborating through analysis what was contained in the notions embodied in the common language. Thus, from the definition of a triangle or a circle, they worked out by reasoning the properties of these figures; and their results were true, and were bound to be true, whether a circle or a triangle existed in nature or no. In this way they succeeded in forming an almost complete system of geometry; but when they sought to apply the same method to the phenomena of nature, they were doomed to failure; for definitions are not the starting-points of physical science, but the very last results of investigation. To appreciate the truth of this assertion, try to construct a definition of an animal or a plant. You will not succeed, and what is impossible for us, with all our accumulated details of structure and function, was obviously beyond the reach of the makers of language. For them the name was a sign for that which they knew by other means, and to analyse its contents could not carry one beyond the knowledge of unlearned men. To some extent the Greeks realised this, and sought to widen the common notions

by direct observation of nature. But still they had the same purpose in view, to quickly arrive at wide generalisations, at axioms from which they could deduce particular phenomena. Let me illustrate this false method by a modern instance.

In a certain theological college, not a hundred miles away, there is a class in which the future leaders of the Church are taught the rudiments of science. With a view to test their initial knowledge the students were asked at an examination to give their ideas as to how the mountains had been formed. One young man had observed that in times of heavy rain, when the gutters are running in flood, a straw would catch on a projecting stone. Mud and floating débris would gather about the obstruction, and when the water had run off, a little hillock would be left standing. So, impressed perhaps by the magnitude of Noah's flood, he conceived that the mountains had been built up in the same fashion.

Now, this reasoning is not quite so ridiculous as you think it is. The observation that makes the first premise is certainly above reproach. Suppose we examine the conclusion and see what it involves. If the mountains have been formed by the deposition of sediment in water, we should expect to find the material of which they are composed to be laid down in layers, the heavy gravel beneath, sand above that, and fine mud over all, as the sediment is deposited in the estuary of a river. We might expect to find also remains of aquatic animals embedded in the mass. As you are aware, that is exactly what we do find in the structure of some mountains, and we know that deposition of sediment in water has been a factor in the making of them. Where, then, is the fault in the reasoning? It lies in this, that the generalisation which forms the conclusion is too wide; and it is not linked to the premises by a strong chain of propositions of gradually widening generality. That deductions can be drawn from it which are confirmed by experience makes it all the more mischievous; for men who reason loosely are thereby entrapped into accepting the generalisation as altogether true.

That was the way in which the early men of science worked and failed, and the method is not yet obsolete. You see it again and again in the scientific literature of the day, though not, of course, in a form so gross as in the illustration I have given. An outstanding example is the spurious science of phrenology. Because character was seen to impress itself on the bodily configuration, especially in the head and face, a leap was made to the conclusion that each faculty of the mind and each moral power has a special seat in the brain, and manifests its degree of development in the external appearance. In accordance with this anticipation, as Bacon would have called it, the various prominences of the head were mapped out as the places of different faculties and moral attributes. Compare with this the manner in which, by the gathering together of clinical, pathological, and experimental data, the localisation of brain function has actually been accomplished.

Throughout the Middle Ages no progress was made in natural science, and there was no attempt to open a path where the Greeks had failed. Indeed it was not realised that the Greeks had failed. On the contrary, it was thought that all that could be known was contained in their writings. Men were content to study these, especially the works of Aristotle; and Aristotle is an encyclopædia of facts, all thrown together, however, without that form and cohesion which is the essence of science. The authority of

the Greek philosopher was supreme, and no man might go beyond him. Modern science, therefore, did not begin till his influence was overthrown, and nature was set up as the sole authority. Several men, and notably Bernardinus Telesius, who founded the first scientific society, have the honour of bringing about the new departure, and appealing directly to nature. But it was Francis Bacon who confirmed the movement, and gave it definite shape, by exclaiming strongly against the futility of the prevailing habit, and laying down with great clearness and foresight the lines along which investigation must proceed if any advance is to be effected. The great merit of Bacon probably lies in this, that he urged the adoption of that course which has been the making of natural science, gradual progress from propositions of narrow to those of wider and wider generality.

It is not my purpose, however, to sketch the development of scientific method, nor to expound all its precepts. An exposition, to have any claim at all to completeness, would require to deal with such things as the principle of the Uniformity of Nature, its value in investigation and the danger of overstretching it; the meaning of the term "Law of Nature"; the necessity of ascertaining the laws of phenomena before questions of causation can be approached; the nature and uses of theory; and the conditions of experiment. It would be profitable, if it were possible in a limited time, to try to show how these things have worked in the building up of the sciences that you have to study. I must content myself, however, with referring to only one or two points; and I hope in so doing to indicate to you that there is something more distinctive in the method of science than you may perhaps have imagined.

Teach the art of observing, the proper use of the eyes, may be said to be the educational cry of the day; and it is implied that people may go through the world seeing very little compared to what they might see. If this opinion is taken only in the literal sense of the words in which it is expressed, it conveys a quite erroneous impression. I occasionally come up to the College at examination times, and I sometimes see a horse being run up and down, while students under examination are keenly watching it, with a view, I suppose, of detecting evidence of unsoundness. This would seem to be one of the most difficult tests to which the art of observing could be subjected. If thorough training is necessary to give one a grasp of the art, it must surely be needed in your case; and all the discipline which you undergo in the class-rooms, the dissecting rooms, and the laboratories might be conceived to be a long process of preparation for this purpose. For myself I know nothing of the veterinary art as a speciality; I should not care to stake my reputation on which is the near side and which the off side of a horse; yet I venture to say that in the motions of the animal under observation I can see as much as the most keen-sighted of your examiners; but,—and here is the difference between us,—I am quite unable to interpret what I see. You too would be in the same position if your education stopped short in the classes of pure science. All your work with the microscope, the dissecting knife, and the test tube would be of no help to you. No amount of previous training of your eyes would serve your immediate purpose. In other words, no practice in reading English books will enable you to translate from the Arabic, though you may see all that there is to see on the printed page.

Clearly, then, observation is not a simple mental act; and the part which

the eye plays in it is not the more important part. There is interpretation as well as observation, and the distinction between them is of the greatest importance in the method of science. Let me impress this distinction upon you by another illustration.

When I was a student member of Sir George M'Leod's clinique a patient was sent in one morning from the out-door department. To the eyes of us students he was no more than a very disreputable specimen of the Glasgow loafer; but he had scarcely entered the room when Sir George said, 'You are a militiaman; are you not?' and the man admitted that he was. Now the Professor had not *seen* anything more than we had seen; but, as he afterwards explained, he had attributed the man's erect carriage to military discipline; he had argued that he was too young to have been discharged from the army, that he was not of the kind whose friends are able and willing to buy their discharge, and also he was not of the type that serves in the volunteers; so he had guessed that he belonged to the militia. The diagnosis in fact was an inference and not a simple act of observation.

While you may gather nothing in the science classes that will enable you to interpret the symptoms of disease, you will nevertheless form the habit of discriminating between what is observation, and what inference. In this you will have gained much; for the confounding of these two is one of the most fruitful sources of error. They always go together, and on that account it happens that two witnesses of the same event will seldom give the same account of it. They disagree because they do not keep distinct what they saw from what they inferred. As a rule men may trust their eyes, but if they would avoid error they must always suspect their inferences.

Every teacher will have his own way of imparting instruction in interpretation along with a knowledge of his subject; but suppose we take by way of illustration the course of procedure that would probably be followed in the teaching of histology. You might be shown first of all a simple, non-nucleated cell. Then you would go on to recognise the nucleus and the cell wall, when it is present. You would become familiar with the different forms of cells and their specialised processes; all in isolated specimens. By and by you would be shown cells *in situ;* and by sections and surface views you would form ideas of their arrangement and relationships. You would study the connective tissue skeleton, the distribution of the blood supply by the capillaries, and the termination of the nerves in or around the cells. In the end you would be able to face a section of such a complex organ as the kidney without being wholly bewildered by it.

Observe that you are not being taught to see more and more at each successive step; but that you are mastering the alphabet of the elements, that you may be able to read the story of the compound organs. It is true that you are not being helped to detect unsoundness in a horse; for you are not studying the symptoms of disease, but are being drilled in the method of science. You are learning how to break up a complex body into its elements; how to marshal the details that they may throw light upon one another and reveal the meaning of the whole. This surely is no slight preparation for the practice of medicine.

Intimately connected with interpretation is the subject of pictorial illustration. Within the last ten or fifteen years the invention of photo-mechanical printing processes has brought about a revolution in the illustrating of books. Blocks can now be produced for shillings which formerly would have cost pounds. This of course makes illustration more

readily available; but leaving out of account the matter of cost, it must be said that science is in danger of losing as much or more than it gains by the use of photography for this purpose. What is gained in accuracy,—and even in this the camera is not above suspicion,—may be lost in clearness. There are certain things, indeed, such as forms in rapid movement, which can be caught only by the sensitive plate; but when one examines the finer productions of the engraver's art (the plates in Hunter's "Gravid Uterus," for example), one must admit that the power of a skilful artist to render form and texture falls little, if at all, short of that of the camera; and the artist can, besides, attain to that which is beyond the reach of the camera. The chief weakness of the camera as an instrument of science is in this, that it represents but does not interpret. When an observer makes his own drawings, as he ought to do, no matter how much he may desire to give a faithful presentment of his subject, he adds to the drawing something of the knowledge which is his, and which is not derived from a single view of the specimen. He thinks to give a facsimile, but he cannot avoid elucidating the obscure passages in the document. And if his purpose is to show laws and the relations between things, that which is the real matter of science, and which it is beyond the power of the camera to depict, he can put into a diagram the fruit of hundreds of observations, and the ideas of many observers. It may be urged, that from a photograph each may make his own interpretation; but he can seldom do so except to a very imperfect extent. No microscopist would profess to interpret a section of tissue without examining it under changes of the focus and alterations in the illumination; and that, of course, is impossible with a photograph.

The kind of things which often appear in scientific publications as illustrations, and which, through bad printing, have lost any claim they may have originally possessed to be considered such, are neither good art nor true science. I believe that they are sometimes admitted with the idea that they afford a kind of guarantee of the observer's good faith. Any guarantee at all is quite uncalled for: science takes no account of the credibility of witnesses. A unique case or an isolated fact has merely a potential value for science: it becomes of real worth only when it has been shown to exemplify a law or form part of a general concept, and its place in science is determined through that, and not by the trustworthiness of him who first recorded it.

The interpretation of nature is a large subject. I cannot be said to have done more than allude to it; yet I must leave it at that, and pass on to say something, in the limited time at my disposal, on the place of classification in the method of science.

You cannot fail to be impressed with the conspicuous part which classification plays in zoology and botany; but you will form a wrong notion of it as a scientific process, if you think of it only as a guide to the mind through a labyrinth of detail and as an aid to the memory. If that were its true function, other systems of arrangement could be devised more suitable to the purpose than those that are favoured by the zoologist and botanist. But scientific classification is more than this. It is the subordination of general conceptions and individual characters according to definite ideas, our ideas of the scheme of nature; and we hope to discover through this subordination of facts what the scheme of nature really is. We group species under genera according to the characters which they possess in common; but we do not bring species together upon chance re-

semblances. We try to show the inevitableness of the resemblance between the species in a genus; and at the present time we do that under the theory that the resembling species are descended from common ancestors. We act with the idea of attaining to a position from which we shall be able to predict the unknown from the known. If, for example, we are right in grouping certain species together as a genus, as the descendants of common ancestors, and if we have reason to believe that these ancestors lived after the present main divisions of land and water had come into existence, then we should expect to find that the geographical distribution of the species in question would be limited; and finding it so, we could predict that if any other species of the genus existed, it would be found within the same limited area.

Scientific classification being of that nature, the medical student who masters its principles will be well prepared for dealing with the data of his clinical work. He will not be content to take these as disconnected units, but he will try to subordinate them, and to see which are primary and which secondary. He will not dissipate his attention on all alike; but he will seize upon the cardinal facts, and concentrate his mind upon them.

I have tried to show you that there *is* a method of science, and to indicate how your work in the early classes of your curriculum tends to cultivate that method in you. If I have appeared to disparage the subject-matter of zoology, botany, and chemistry, I would have you who are beginning your studies to be assured that you cannot afford to do so. You must deal with these subjects as if you had no other object in life than to become expert zoologists, botanists, and chemists. In no other way can you become familiar with scientific method than by working as men of science. Those of you who will soon be engaged in your life's work I would advise to take up some scientific pursuit, if only as a hobby for the entertainment of your leisure. It matters little what branch of science you may elect. If there were a science of surgery or of medicine, I would say, choose that; but though medicine and surgery rest upon science, they are not themselves sciences. Within the range of veterinary interests, however, there is a splendid field for research, as I have pointed out; and by taking a share in the work there waiting to be done, even if it is only to the extent of accurately recording observations, you will gain a profit for yourselves in your increased efficiency as medical men. Some will tell you that the most desirable practitioner is the practical man. Do not be misled by the looseness of the phrase. So far as it emphasises the value of natural sagacity no fault may be found with it; but when it asserts that the work of a scientific profession can be done by following common-place rules and traditional maxims, it is mischievous. Nor is the opinion justified by the fact that those who pursue this course may meet with a considerable measure of success; for right action *may* follow upon a very imperfect kind of knowledge. According to an old saying attributed to the Epicureans, even the ass knows that two sides of a triangle are together greater than the third. He knows that the nearest way to a point on the opposite side of the field is by the straight line across and not round by the hedges. The ass has a practical knowledge of this truth of geometry, and acts upon it; but—he is an ass nevertheless.

In conclusion, let me on my own behalf and on behalf of the College staff and the friends of the College, express the hope that in your future careers you will do honour to yourselves, to your profession, and to the school that has trained you.

Dick Veterinary College, Edinburgh.

THE Seventy-eighth Session of the Dick Veterinary College, Edinburgh, was opened on Wednesday, 3d October, with an address by Sir John Gilmour, Bart., of Montrave. There was a good attendance of students and friends of the College. Sir Andrew M'Donald, who occupied the chair, said the College was in a pretty healthy state, although, like other educational institutions and businesses, it was meeting with keener competition.

Sir JOHN GILMOUR took as the subject of his remarks the best means of supplying our service with Army Remounts. The question naturally divided itself into two heads—the supply of remounts in the time of peace, and the supply of remounts in the time of emergency, but he would not express any decided opinion under the latter head until those interested in horse-breeding in this country could have the benefit of the experience of those in charge of the remount stations in South Africa. Dealing with the first head of his subject—the supply of remounts in time of peace—he said that during the five years previous to the outbreak of the South African War the number of remounts required was about 1500 per annum. His opinion was that these remounts ought to be bred in this country by our own farmers, and purchased direct from them by the Remount Department. He knew that certain remount authorities did not consider this plan a feasible one. The other day General Truman was asked by Mr. Charles Tyndal if the department were prepared to take from the farmers unbroken three-year-old horses, and the General, replying in the negative, said their best horses in the war were a lot of Argentines, landed in South Africa at £14 apiece, and which were properly broken and knew their business. He (Sir John) thought that it would be found that this lot of Argentines were a very exceptional lot, and that they would be balanced by others from the Argentine that were not properly broken and did not know their business. He would like to know if the price stated included the expenses of the remount officers in the Argentine. From information he had received he could speak of a lot of eighty Argentines served out to a company in which he had a considerable interest. They were supplied at Stellenbosch and at Wellington, which was not far from that camp; several died, while at Potchefstroom very few remained. Even though they only cost £14, he thought they were pretty dear at that figure. While these remounts would go fairly well in the ranks, when they were ridden separately they neither answered bit or leg. He was not one of those who at all approved of the Government starting large horse-breeding establishments, as the risk and uncertainty of such a scheme would be too great. He found from the statistics of the Royal Commission on Horse-Breeding, of which he was a member, that on an average 60 per cent. of foals were left by the Government or Queen's premier stallions, and he was certain that by purchasing the young horses after they had reached their third year the country would get far better value for its money than at present. He maintained that the farmers of the United Kingdom could breed the animal required, and with a little encouragement they would do so, but he admitted that they could not break and handle a young horse properly. If, instead of the present method of not purchasing until the horses were four or five years of age, and only giving a top price of £40 or £45 for army remounts, the

Government would buy at three and a half years of age, they would secure many horses of very considerable value, which could be sold to officers joining the service, who had at present to pay good prices to fashionable dealers for high-class chargers, The money now placed at the disposal of the Royal Commission on Horse-Breeding—£5000 per annum—was ridiculously small and insufficient, but in spite of that the Commission were able to send out to districts in England, Scotland, and Wales 29 thoroughbred stallions to serve half-bred mares at the small fee of 42s. 6d. During the thirteen or fourteen years in which they had carried on the work they had been able to put in the country as sound stallions as it was possible for three veterinary surgeons to make them, and that had undoubtedly resulted in choking off the roads thorough brutes, which propagated their kind and did immense harm to half-bred stock. They served annually about 1500 mares, which left between 800 and 900 foals. The scheme had worked so successfully that it only required to be enlarged to place the remount department of the country in the way of having at its disposal admirable half-bred stock to select from. But in order to do so the grant to the Commission must be increased by three or four times the present sum, so that a larger number of approved stallions might be subsidised, and breeders should be assured of a fair market for their stock at three and a half years old. If such a scheme were properly worked for a few years he did not think there would be much need for the country to depend on foreigners for its remounts.

On the motion of Councillor GULLAND a cordial vote of thanks was passed to Sir John Gilmour for his highly practical address. Sir John, in replying, said there was no more honourable calling than that to which veterinary students devoted themselves. He knew of few professions in which more opportunities were offered for doing good, and in country districts especially, if the veterinary surgeon made the best use of his opportunities, he very soon made for himself a position in which he ran the parish minister neck and neck.

Principal DEWAR, in proposing a vote of thanks to Sir Andrew M'Donald for presiding, mentioned that last year the students from the Dick College had 79 per cent. of passes, as against 70 per cent. made by the London College Students.

Royal Veterinary College, London.

THE sessional course of instruction commenced on Tuesday, 2d October, when the introductory address was delivered by Professor M'FADYEAN.

After referring to some of the principal events of the preceding session, Professor M'Fadyean observed that the occasion was in one respect a very special one, inasmuch as they stood at the close of the century which embraced almost the whole past history of the veterinary profession in Great Britain. From time immemorial man had doubtless endeavoured to interfere with the course of disease in the animals which he had domesticated; but the foundation of the oldest European veterinary colleges during the latter half of the eighteenth century was the real birth of veterinary science. One hundred years ago the Royal Veterinary College was only in the tenth year of its existence, and since then great changes had come over veterinary opinions and practice. A study of the methods by which

error had been eliminated and knowledge built up could not fail to furnish some valuable lessons for the profession at the present day. Referring, in the first place, to the growth of knowledge regarding the cause of disease, he instanced the case of glanders and tuberculosis. At the beginning of the century the fact that glanders was contagious was generally admitted in this country, but it was not admitted that every case arose in that way. Coleman, who was principal of the College during the first thirty-nine years of the century, believed that the disease was more frequently generated than caught. Such a belief was never justified, and it only appeared to be so because outbreaks of the disease not infrequently occurred in stables into which no horse showing any symptom of glanders had ever been admitted, and because it often broke out during or at the end of a voyage among horses that appeared to be perfectly healthy at the time when they were shipped. These were actual facts, of which illustrations continued to occur at the present time, but they did not prove or even make probable the spontaneous origin of glanders. One of the premises necessary to justify the conclusion had been erroneously assumed to be true, viz.,—that the apparently healthy horses among which the disease broke out were all free from glanders. When large cargoes of horses were shipped over sea the disease often broke out among them simply because glanders was a very common disease throughout the whole of Europe, and because many glandered horses retain for considerable periods the appearance of perfect health. For the elucidation of this latter truth neither genius nor deep insight was necessary. All that was required was systematic, careful post-mortem examination, which could not have failed to reveal the existence of glanderous lesions in many cases in which the horse had shown no symptom of the disease during life. Judging from the literature of the time, tuberculosis as a disease of the lower animals did not appear to have attracted much attention among veterinary surgeons in this country during the early years of the century, but when it came to be recognised that it was a common disease among cattle they adopted the views then prevalent regarding human consumption, including a firm belief in its inheritance. As recently as twenty years ago the opinion that tuberculosis was an extremely hereditary disease was universal among veterinary surgeons, and it was only within the last decade that its erroneousness had been generally recognised. This belief was shattered (1) by recognition of the fact that contagion was at least one of the modes of origin of the disease; and (2) by careful post-mortem examination of the new-born calves of tuberculous cows. Observations of the latter kind had shown that, except in comparatively rare instances, the progeny of tuberculous cows came into the world without any trace of the disease in any of their organs, and recognition of the contagious nature of the disease made it almost absurd to ascribe its greater frequency in particular families to congenital transmission. The natural and correct interpretation of the facts was that the greater frequency of tuberculosis among the progeny of those animals which were themselves visibly affected with the disease was due to the offspring being almost invariably born into a place in which they were afterwards constantly exposed to the risk of infection. These and many other instances emphasised the importance of painstaking investigation along the lines of clinical observation and post-mortem examination. At the same time it was important to notice that the great majority of the discoveries of the century regarding the causes of disease had been made,

not by greater assiduity in collecting clinical observations, or in recording the appearances revealed by post-mortem examination, but by the application of new methods of research, in which the use of the microscope, the artificial cultivation of bacteria, and experimentation with animals had played the chief part. It was difficult to apportion to each of these three methods of research the exact share of credit that belonged to it, mainly because they had usually been employed in combination. Immense strides in pathology had undoubtedly been made simply by the microscopic examination of diseased tissues, and a large part of our knowledge of the disease-producing bacteria had been acquired independently of experiment on the living animal; but no honest person acquainted with the facts could deny that we now knew much that was of the highest practical importance regarding both human and animal diseases of which we should still have been ignorant had experimentation on living animals been a forbidden method of investigation. Discoveries which threw new light on the cause and nature of disease necessarily influenced methods of treatment and prevention, and the past century had witnessed great changes in the means adopted to counteract disease. There was no lack of alleged remedies at the beginning of the century, but many methods of treatment in which our forefathers placed much confidence had now been almost entirely discarded. Bleeding was a notable example. There could hardly be a doubt that it killed far more patients than it cured, and the fact that it had ever found favour should make us careful in estimating the effect of remedies in our own time. Blistering and firing were still much practised, and it might be said that they had stood the test of the century, but it was perhaps permissible to suggest that the clinical evidence even of a century might not be conclusive in such a question. At the time when every patient, human and equine, was bled and physicked there was no evidence as to the merits of less vigorous treatment, and so at the present day it might with much truth be said that the alleged overwhelming evidence in favour of firing and blistering was no evidence at all. Thousands of horses were fired and blistered, a mode of treatment which involved a period of rest; many got well or improved, and the result was set down to the credit of the counter-irritation. At the present time no one with any considerable practice dared to treat sprains, splints, and spavins by simple rest without blistering or firing, and neither the past nor the present furnished the necessary data from which to estimate the therapeutic value of severe counter-irritation. We were, perhaps, entitled to regard it as one of the advances of the century that we were more inclined than our forefathers to credit the sick or wounded animal with greater natural powers of recovery, and a fuller knowledge of pathology had done much to restrict the administration of internal medicines, and to emphasise the importance of all that is included under the term hygiene. We had to come to recognise that not a few of the things that were at one time viewed as being themselves the essence of disease were in reality processes of defence or repair, and did not require any repression by medication. When the cause of disease had been removed, medicinal substances could do little or nothing to hurry nature in the process of repair, and great care should be exercised before saying of any drug that "if it did no good it could do no harm."

PHOTOGRAPHS by Professor OWEN WILLIAMS during his term of [illegible] New
of Ordinary Ma[illegible]ts in

Photograph of mule (*a*) inoculated with mallein 14 hours previously.

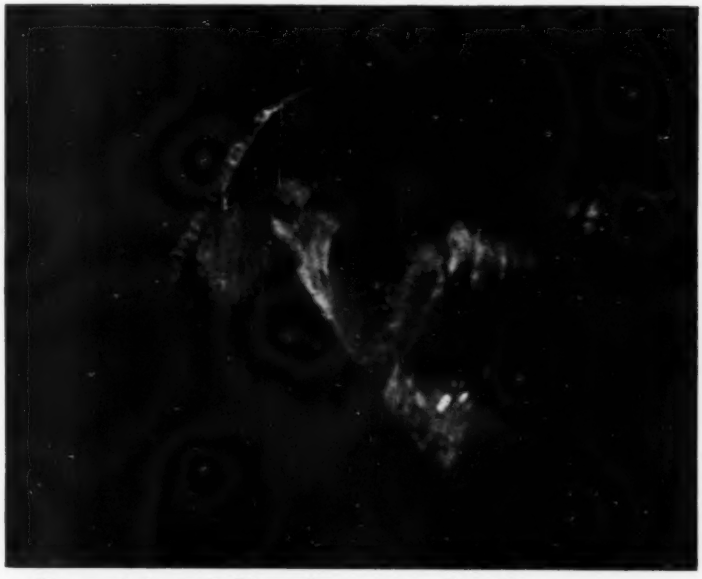
Photograph of mule (*a*) inoculated with mallein 38 hours previously.

This swelling was very hot and painful, but gradually subsided, and had disappeared after five days.

On post-mortem examination, no lesion of disease of any description was discovered, and guinea-pigs inoculated with the juices and blood showed no ill effects.

erm of ... New Orleans in the Winter and Spring of 1900, showing the inefficacy
ary Ma...sts in the Mule.

Photograph of mule (*b*) 14 hours after inoculation with mallein.



Photograph of mule (*b*) 38 hours after inoculation with mallein.

The swelling in the neck was very hot and painful, but gradually became less so, then dropped into the jugular gutter, and ultimately disappeared in about a week.

On post-mortem examination no lesion of disease of any description was found, and guinea-pigs inoculated with the iuices and blood showed no ill effects.

Original Papers.

ON SOME DISEASES OF THE SKIN.[1]

BY PRINCIPAL W. WILLIAMS, F.R.C.V.S., F.R.S.E., J.P., ETC.

MR. CHAIRMAN AND GENTLEMEN,—I have prepared this paper at the request of your Secretary, and I am very glad in one way that he has selected this very difficult subject, for it gives me the opportunity of drawing your attention to an error in judgment committed in Perthshire a short time ago, when it was declared by officials of the Government that a certain skin disease which had broken out amongst several flocks of sheep was the dreaded Foot-and-Mouth disease, and restrictions upon the movements of animals were consequently enforced, entailing a great loss to stockowners at a time of the year when the sheep and cattle trade is most active,—for at that time sheep and young cattle are sent south for sale in consequence of the climatic conditions of the further north.

With regard to the classification of skin diseases, I must confess that, even at the present time, this is most unsatisfactory and very confusing. Willan and some of his predecessors classified them according to what are called the primary lesions,—such as papules, pustules, vesicles, bullæ, scales, &c. Erasmus Wilson used a similar classification, which he termed a clinical classification, which comprised no less than twenty-two varieties; and Hebra classified them on a pathological basis—hyperæmia, anæmia, hæmorrhages, hypertrophy, atrophy, &c. &c. I need not enter further into this, except to state that all classifications are still unsatisfactory. Many modern dermatologists are of opinion that the majority of skin diseases, that cannot be distinctly traced to a cause, are due to some *mal-secretory* condition or disease of the kidneys, and that the diseased condition of the skin is due to the irritation of an excretory product, which, under ordinary circumstances, would have been excreted by the kidneys. In veterinary practice this condition is a very rare one, but one disease, which was first described by me, can be distinctly traced to this cause. I refer to urinous eczema.

To leave generalities and come to particulars, I will first of all refer to itchiness or pruritis, which is merely a symptom of some disease of the skin itself or of some internal irritation. For example, we have pruritis of the tail, which is often symptomatic of the *Oxyuris vermicularis* in the rectum; then itchiness is a symptom of mange, sometimes of indigestion, and the most acute and distressing case I ever saw was in a Clydesdale, which had been treated for pneumonia with *paraldehyde*. In cases of itchiness the cause must be removed; if mange, the acaris destroyed; if arising from intestinal irritations, these must be removed. In the case of "paraldehyde pruritis," I had the horse washed with a solution of washing soda, which gave immediate relief.

The next skin disease to which I wish to refer is "urticaria, surfeit or nettle rash." Like many other diseases, this is not so common now as it used to be, due undoubtedly to the more careful feeding and management of horses. The symptoms are manifested very suddenly. There may or may not be a preceding pruritis; and the lesions characteristic of the disease are elevations of the skin exactly resembling those produced by the sting of a nettle (*urtica*, a nettle). Now this disease is due to reflex irritation, arising from some disturbance of the digestive track and the formation of some excretory product—some say excess of urea.

In many instances the symptoms disappear very quickly, but I have seen cases most obstinate in their nature.

[1] Read before the Yorkshire Veterinary Medical Society at Leeds, Oct. 26, 1900.

Treatment.—Aperients, some soothing dressing to the skin, and in my experience an ounce of Scheele's prussic acid in about 2 quarts of water applied to the skin gives rapid relief. In chronic cases the origin must be carefully considered. Arsenic is recommended by some, after aperients. I must say that I have been greatly disappointed with arsenic, and have substituted iod. pot. and colchicum, or, if there be debility, iron, bitters, and colchicum.

Acne—a point or bloom—affects the sebaceous follicles, and appears as pimple, known as warbles or grubs in the skin, as well as to follicular mange in the dog, which is due to the presence of a parasite called the "*Demodox folliculorum*," and known in the human patient as "blackhead," seen about the face, and now termed a *comedo*—"to eat up." This comedo is difficult to kill. In fact it was stated at one time that the disease was incurable. It is easily known by the foulness of the odour emitted by the skin. The comedo, seemingly innocuous in man, has been transferred by Gruby from man to the dog, in whose skin it lived and propagated, and in two years had invaded all the hair follicles, and the hair had disappeared. The reason why it is so difficult to kill is that the heads of the parasites are directed inwards towards the base of the follicles. They vary in size from $\frac{1}{88}$ to $\frac{1}{555}$ of an inch in breadth. The best treatment is first of all to saturate the skin with lard or some other greasy substance, applying smart friction, and in long-haired dogs the hair should be clipped; allow the dressing to remain for an hour or two, and then wash off with a solution of soda in warm water, then apply creosote, olive oil, and liq. potassæ. This method of dressing to be renewed say every two or three days, when a cure might be effected. In many cases, however, apparently cured, the disease is apt to return, but where the parasites come from it is difficult to determine.

Herpes.—Amongst this group what are known as mallenders and sallenders might be included. These eruptions are seen about the flexures of the joints, and are much more common in the cart-horse than in the better bred one; they are difficult to cure on account of the constant movements of the parts. They are often caused by a want of care in the application of blisters, or to careless firing. In all cases of counter-irritation being applied to the limbs the bends of flexures should be protected from their action by being covered with vaseline or some other protective substance.

Your secretary particularly requested me to introduce the subject of *Grease* as being a practical one and of frequent occurrence.

There are three forms of it, namely, simple dermatitis, characterised by reddening and inflammation, with more or less lameness; suppuration and frequently the formation of fissures or cracks, particularly in the hollow of the heels. The causes are external, such as prolonged wetness of the legs in sloppy weather, frost-bites, &c.

The treatment is that for an ordinary dermatitis.

The second form may be truly called grease. Seborrhœa, or seborrhœic dermatitis, characterised by inflammation of the skin, with a discharge indicative of excessive activity of the sebaceous glands, which, if neglected, is apt to degenerate in the grapy form of grease, a condition often difficult to overcome. The pure sebaceous form is best treated with antiseptic dressings. Poultices at first, if much lameness be present, and afterwards the application of carbolised chalk, boracic acid, iodoform, or any other favourite dry dressing. In all cases, during the inflammatory stages purgatives and diuretics. In the grapy form, removal of the growths by the actual cautery; but the growths are very apt to return, and are due to a constitutional diathesis which, I believe, is hereditary.

Of the various forms of mange I will simply state that they have been prevalent in Edinburgh for some time. In many cases both the sarcoptic and psoroptic mites have been found. The symbiotic, affecting the legs, is always with us.

We found a very simple treatment to be very successful. Dress the body all over with any oil—train oil forty parts, sulphur one part. Wash off at the end of a fortnight, and dress again. Very few cases required a third dressing, and in three weeks they were fit to be discharged. By watching carefully for the slightest symptom of itchiness, isolating the horse, dressing him, and thoroughly washing the harness with water, soap, and Jeyes' fluid, we were enabled to prevent the spread of the disease in a very large stud.

Ringworm.—I think we may state that honeycomb ringworm or favus (*favus*, a honeycomb) is scarcely if ever seen in this country; although experiments have shown that the plant *Achorion Schönleinii* can by inoculation produce the disease from man to animals and from animals to man. It can also be grown upon plants; but the other form, the *Tinea tonsurans*, is very common. The parasite termed the Tricophyton (*Tricophytosis*, a hair and a plant), like that of favus, has its seat in the hair follicles. As a rule a good dressing with iodine will effect a cure, but I have seen very obstinate cases.

I need not but refer to the disease which I have termed urinous eczema. It is rare, and, as stated in my work on surgery, due to disease of the kidneys, the skin evidently performing a vicarious function. I never knew a case recover.

And now, gentlemen, I must refer to a reported outbreak of foot-and-mouth disease in Perthshire within the last few weeks, and which caused considerable loss to the farmers there, and very great excitement all through the country. We had heard of outbreaks in England and Wales. Of these I can say nothing, but I was personally engaged in the Scotch outbreak. The Board of Agriculture having put on the restrictions, I am glad to state that my opinion caused the Board to remove these restrictions.

On arrival at Perth I had to proceed some miles to examine three flocks of sheep which were said to have foot-and-mouth disease.

On examination I found the disease to affect the coronets in patches, the legs even as high as the elbows and above the hocks, around the lips, and as high up as the eyes and base of the ears; but in no case was there any sign of a lesion in the mouth, and this was confined to the lambs, although there were many older sheep grazing in the pastures and many cattle were in close proximity, but none of these were affected, although the disease had been there for, I believe, four or five weeks.

I recognised the disease as a pustular eruption, termed *Impetigo labialis et coronalis*, or what Professor Dick called "Crown scab," and due to the wetness and rankness of the grass upon which the animals were pastured.

The disease commences as a small reddish spot, which may become vesicular and speedily pustular. These pustules dry up into a crust, loosely attached to the skin, and if removed the skin beneath is reddish, moist, and some pus exuding. Around the coronets and along the legs the same appearance is seen, and in some cases there was more or less diffused suppuration, detaching the horn from the sensitive structures of the foot, and causing great lameness.

I am glad to say that my opinion was proved to be correct. I certainly felt the gravity of my position, and did not give my opinion without very careful consideration.

LANCASHIRE VETERINARY ASSOCIATION.

THE Quarterly Meeting was held at the Grand Hotel, Manchester, on September 6th.

The PRESIDENT, Mr. ABSON, alluding to his visit to the recent Health Congress at Aberdeen as delegate of the Association, expressed his regret at the poor attendance of veterinarians. There was, however, an excellent presidential address from Professor Williams, who, in his usual trenchant manner, dealt with many diseases of a contagious character. Mr. M'Phail, of Edinburgh, whose paper was on "Pseudo-Tuberculosis," disabused the minds of his hearers of pseudo-tuberculosis of the lungs of sheep being of a tuberculous nature at all, and clearly demonstrated, at any rate to most present, that it was due to one of the round-worms. The veterinary section managed to get their motion, that sheep's lungs affected with pseudo-tuberculosis were dangerous to man as food, passed unanimously at the general meeting. Mr. Peter Moir's paper dealing with diseases of animals communicable to man was an exhaustive one and well worthy of the occasion. It was listened to with rapt attention. The only regret was that there were not more members to hear it. He was afraid there was a disposition in the profession to rather taboo the Royal Institute of Public Health, which was, however, doing a great and good work, and veterinarians ought to make it their duty to associate themselves with the Institute at it Congresses. Not only were the papers on veterinary subjects instructive, but those on other matters with which veterinary surgeons were conversant were interesting. For instance, one on "Malaria" by Dr. Manson, the best authority in the land, no doubt, on the subject, was most edifying, the life-history of the parasite being fully traced and explained to the audience. Mr. M'Kinna, who was at the Congress, would share this opinion. The President of the Society, Professor Smith, who came in while Professor Williams was giving his address, looked disappointed at the meagre attendance. However, it was to be hoped that on future occasions the attendance would be better, and that the Royal College would, as in duty bound, send a delegate of their own.

Mr. M'KINNA, in moving a vote of thanks to the President for so ably representing the Association at the Congress, regretted the poor attendance of veterinary surgeons. To represent the profession at such Congresses was, in his opinion, the only and best way of putting the profession before the public. He quite endorsed the President's view that the papers were interesting. Every effort should be made to send one delegate at least to represent them at such Congresses, for the benefit of the public as well as that of the profession.

Mr. FAULKNER seconded Mr. M'Kinna's proposition. Some allowance, he thought, might be made for the profession and paucity of attendance at Aberdeen. Certain things had influenced it—one, the manner in which the proceedings of the veterinary section were conducted last year at Blackpool. A charitable view of those proceedings was, however, taken by some of the Lancashire members, who hoped that by keeping in touch with the Institute the arrangements at Aberdeen would be improved, and he was glad to believe that the profession, though sparsely represented, had a better position in the Congress. Again, there was the fact of the National Association meeting following closely upon the Congress. Every one could not so arrange matters as to be able to attend at Aberdeen and in a short time attend at Dublin. The small attendance of veterinary

surgeons at Aberdeen was regretable, but, to make that section thoroughly representative and well supported, the objects of the Institute should be brought prominently forward at the Society's meetings, and into closer touch with the profession, for many in the profession knew very little of the Institute, and it was necessary to educate them as to its usefulness, when he had no doubt that that knowledge would develop and the Institute become more popular.

Mr. WOLSTENHOLME then submitted several pathological specimens:—

(1.) The femur of an adult horse which had suffered oblique fracture about the middle of its shaft. The specimen was one he had casually met with at the knacker's yard, and which, from extensive necrosis of the head of the bone, together with the manner in which the broken portions of the shaft had become united, showed that the animal must have been in acute pain for a period extending into months. He regarded it as a marked example of cruelty to allow a horse in such a condition to have remained alive.

(2.) A portion of the mesenteric artery of a three-year-old cart colt, which had been destroyed after being in a debilitated and anæmic condition for months. The specimen, with other parts of organs, had been forwarded to Mr. Wolstenholme for an opinion as to its being a case of equine tuberculosis. The lesions were, however, due to the irritation of nematode parasites, and the artery in question showed an aneurism of about the size of a hen's egg, the walls of which were perfectly rigid from calcification. He was able to find one specimen of an immature form of the *Sclerostoma equinum*, which was exhibited mounted.

(3.) The head of a young goat, in which the lower jaws especially, and to some extent the upper jaws, had become involved in extensive proliferation of new material in the formation of osseous tissue which had not gone on to the deposition of lime salts—that is to say, the jaws were very much enlarged, very spongy, vascular, and cut easily with the scalpel.

Mr. FAULKNER said he had seen a number of such cases in goats, and something similar in very small young ponies, from three to four years old, and both upper and lower jaws were affected, the latter more so.

Mr. PACKMAN spoke of his cob, which was a highly nervous animal when in health. About the end of June last both fore legs were blistered, and some four days after the cob had a fit, in which it remained three or four minutes, when it got up shook itself, and walked to the box and commenced eating. Two or three weeks afterwards the fits recommenced, occurring at the rate of three and four per day, each more severe than the last. The animal was now at his place, but it had great difficulty in walking. He inquired the cause of the fits. Surely it could not be reflex from the irritation set up by the blister?

Mr. M'KINNA thought it might be one of two causes, viz., some organic lesion in the brain, or reflex. Had it been noticed whether the cob had lost flesh at all?

Mr. PACKMAN.—The cob did lose flesh at first. It was of a very excitable and nervous temperament.

Mr. TAYLOR.—What age is he, and have you had him long?

Mr. PACKMAN—Nine years. I have had him four years. The question was, did the excitement from the blister bring about or hasten that condition of things? He thought so, and that it would have come on had the animal never been blistered.

Mr. TAYLOR thought tonics were required. The fits were, no doubt, due to some faulty circulation of the base of the brain.

Mr. M'KINNA related the case of a five-year-old chestnut well-bred hackney, to which his attention was first called some three years ago. It appeared that an injury, probably a kick, had been received near the symphysis of the lower jaw. He treated the case in the ordinary way to relieve pain, but though the latter was relieved the swelling did not subside—on the contrary, it steadily grew. He suggested to his client to allow him, after irritation had subsided, to trephine the part, but he would not consent, as it was a very valuable animal. The case disappeared entirely from Mr. M'Kinna until the other day, when he noticed that the growth had become an enormous size. There was, however, no evidence of disease to the skin. The teeth were all right, except that the second molar was slightly cracked, and in the crack a little piece of wood had been wedged in between and against the side of the gum, but this had not inconvenienced the animal. Obtaining his client's permission to operate, he cocained the part and trephined the bone, when about three or four ounces of pus escaped, which was of a very putrid character. After washing out the cavity a small, thin, fragment of bone was found, which had evidently been floating in the pus. He would be pleased to hear the opinion of the members on the case, and also as to the effect of an operation before the tumour had developed so extensively.

Mr. TAYLOR, to emphasise the importance of extreme care in diagnosis, mentioned the case of a valuable mastiff dog brought to his place, suffering, according to the owner, with obstinate constipation. The dog had been showing signs of wanting to defæcate, and the owner, like most men do, had given it castor oil, which had produced fluid stools. Further, the dog had been disinclined to lie or sit down, and it was noteworthy that with the frequent attempts to defæcate there was no passing of blood. When approached at the rear the mastiff showed his teeth, so having secured it he made a digital examination of the rectum, when he found a portion of partially digested bone which had passed into the alimentary tract and become arrested in the rectum, being transfixed there and firmly embedded in the mucous membrane. By application of oil and gentle manipulation he was able to remove it without any surgical operation. After an injection the dog was taken home, and not having heard anything of the case since, he presumed it was all right.

The PRESIDENT referred to a case he had some considerable time ago, where a horse was frequently showing symptoms of colic. One day when the animal was particularly bad he emptied the rectum, and passing his hand up carefully as far as he could he felt a swelling which palpated. His conclusion was that he had an abscess. He lanced the sac and quite three half pints of pus escaped, leaving a big cavity which he washed out for a week after with Reed's pump, with a catheter at the end of it. The case did well.

Mr. WOLSTENHOLME cited a case in which he had successfully removed a large fibrous polypus from the left nostril of a cart mare, which nearly occluded the passage, and a smaller one from the right nostril.

The PRESIDENT quoted the case of a horse taken with colic at a brewery. On exploring the rectum he found a calculus, but though within reach of the tips of the fingers it could not be dislodged. An operation being arranged, the animal was put under chloroform, the flank was thoroughly washed and cut into in the region where tapping is performed.

Got up the bowel to the outer incision, removed the stone, stitched up the wound with an ordinary continuous suture, drew the muscles together by soft silk sutures, and afterwards stitched up the outer opening with tape. The operation was carried out under strictly aseptic conditions. Unfortunately, however, disintegration of the lungs was manifest on the second day after the operation, and death ensued shortly after. Post-mortem revealed that the wound in the bowel was healing by first intention—if it had not already done so—and death was no doubt due to absorption. When sure that a calculus existed in the floating colon, he saw no reason why an operation should not be performed with success. The thing to his mind was an early operation.

THE NORTH WALES VETERINARY MEDICAL ASSOCIATION.

A NUMBER of members of the profession residing in North Wales met together on the 18th inst. at the Bush Hotel, Llangefni, Anglesey, to discuss the desirability of forming a Veterinary Medical Association for North Wales. There were present Messrs J. Hughes, Sarn; T. C. Howatson, St. Asaph; R. Jones, Towyn; W. Luther Jones, Menai Bridge; E. Kyffin, Abergele; J. Matthews, Llanfair, P.G.; G. J. Roberts, Pwllhelli; R. S. Rowlands, Abergele; W. Hall Savage, Bangor; O. Thomas, Llanerchymedd; H. Williams, Ty-Croes; W. Wynne Williams, Dolgelly; O. Trevor Williams, Llangefni; and T. Williams, Aberystwyth. There were also present as visitors Dr. Jones, Pwllhelli; Dr. T. Tyrer Jones, Llangefni; and Messrs. T. Hobday, Manchester; and J. Hobday, veterinary student.

Letters or telegrams of regret at inability to attend, and expressing goodwill towards the Association, were received from Messrs. F. Booth, Colwyn Bay; C. Cartwright, Llanasa; E. P. Edwards, Mold; J. H. Wynne, Denbigh; W. J. Fletcher, Wrexham; W. Hughes, Caerwys; H. O. Richard, Corwen; J. Roberts, Wrexham; and Rhydwen Jones, Llanrwst.

Mr. Wynne Williams was unanimously elected the first President; Mr. J. Matthews, Vice-President; Mr. H. Williams, Ty-Croes, Treasurer; and Mr. O. Trevor-Williams, Hon. Secretary.

Rules for the guidance of the members were drawn up, and it was decided that the Association should meet twice a year, the dates being fixed upon the first Tuesday in March and September.

It was decided that the next meeting should be held in March at Conway.

The members present assembled at one o'clock in the Secretary's paddock to witness a practical demonstration of Crypochid Castration by Professor F. Hobday, F.R.C.V.S., of London. The subjects selected were two cart colts, aged respectively three and four years; both operations passed off satisfactorily. I am glad to say that the horses are getting on well; they hardly swelled at all, and this is attributed to the antiseptic precautions.

After the demonstration the members partook of high tea provided at the Bull Hotel, the meeting being held afterwards.

During the course of the proceedings Professor Hobday was elected as the first honorary member of the Association.

The usual votes of thanks terminated the proceedings.

CONTAGIOUS DISEASES ANIMALS ACTS, 1864 AND 1890.

SUMMARY OF RETURNS OF OUTBREAKS for the Five Weeks ending 20th October 1900.

ENGLAND AND WALES.

Swine Fever.	Glanders (including Farcy).	Rabies.	Anthrax.	Foot and Mouth Disease.	Sheep-Scab (for month of September).
Outbreaks 89 Slaughtered 463	Outbreaks 117 Attacked 181	Dogs Attacked 5 Other Animals 1	Outbreaks 28 Attacked 37	Outbreaks 38 Attacked 3	Outbreaks 24

SCOTLAND.

Outbreaks 4 Slaughtered 93	Outbreaks 0 Attacked 2	None.	Outbreaks 14 Attacked 18	None.	Outbreaks 4

IRELAND.

Outbreaks 21 Slaughtered 396	None.	Dogs Attacked 2 Other Animals 0	None.	None.	Outbreaks 22

Communications, Books, Journals, &c., Received.

Agricultural Journal (Cape of Good Hope); Berliner Thierärztliche Wochenschrift; La Clinica Veterinaria (Milan); Deutsche Thierärztliche Wochenschrift; Tannoform in Veterinary Medicine (March); The Sanitary Journal; Scottish Medical and Surgical Journal; Veterinary Record; La Riforma Veterinaria; Le Mois Scientifique (Paris); L'Echo Vétérinaire (Liège); Annales de Médecine Vétérinaire (Brussels); Johns Hopkins Hospital Reports; Journal of Comparative Medicine and Veterinary Archives; Recueil de Médecine Vétérinaire; Gazette Médicale de Paris; Modern Medicine; Johns Hopkins Hospital Bulletin.

Received for Review—Veterinary Operations, by Pfeiffer-Williams. Ponies, Past and Present, by Sir Walter Gilbey, Bart. Report from Veterinary-Colonel Queirpel, India.

Owing to great pressure, we are unable to publish several important contributions.